PROFESSIONAL

DIGITAL SOUND PROCESSORS

User's Manual

Seed Guangzhou Electronic Ltd.
Seed Asia Ltd.

KD-1540P

Speaker Management

482mm 19"

DIGITAL

USB

Catalog

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IMPORTANT SAFETY INSTRUCTIONS

⚠ Note: in order to ensure safety, please read these instructions carefully

All safety and operating instructions should be read before the product is operated.

Attention:To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture!

1 Ventilation

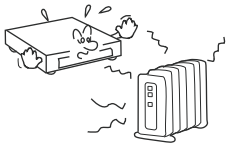
Do not block any ventilation openings.

2 Cleaning

Clean only with dry cloth.

3 Heat sources

Do not install near any heat sources such as radiators, stoves, or other apparatus that produce heat.



4 Power cord proctecion

Protect the power cord from being walked on or pinched particularly at plugs.

5 Overload

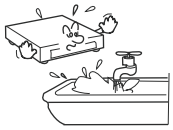
Power plug should not overload.

6 Objects or liquid entry inside the unit

Be careful that no objects fall or liquid is spilled inside the unit through ventilation openings.

7 Humidity

The unit should far away form water.



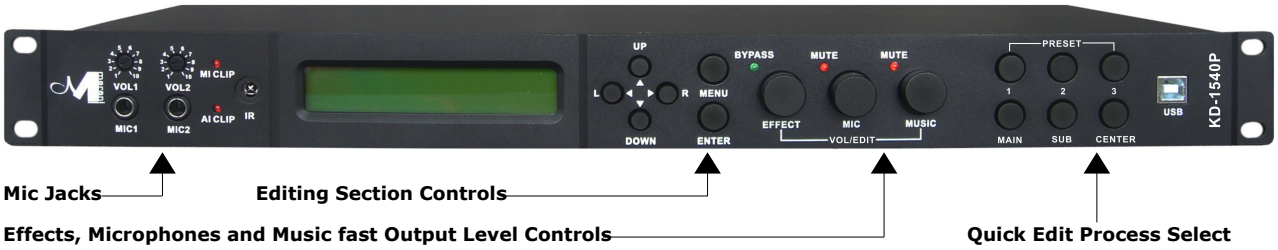
8 Maintenance

Refer all servicing to qualified service personnel. To prevent the risk of shock, do not attempt to service this equipment yourself because opening or removing covers may expose you to dangerous voltage or other hazards.

KD-1540P Digital Karaoke Processor

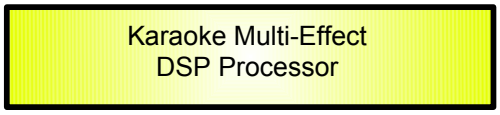
Quick User's Manual

Referring to the front panel here below, the description of the KD-1540P functions with reference to the control buttons and encoders.

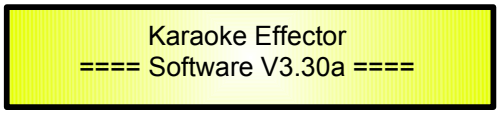


- **Getting Started**

As soon as the KD-1540P is turned ON, on the LCD will appear in sequence the Device model Name



and the Control Sw Version



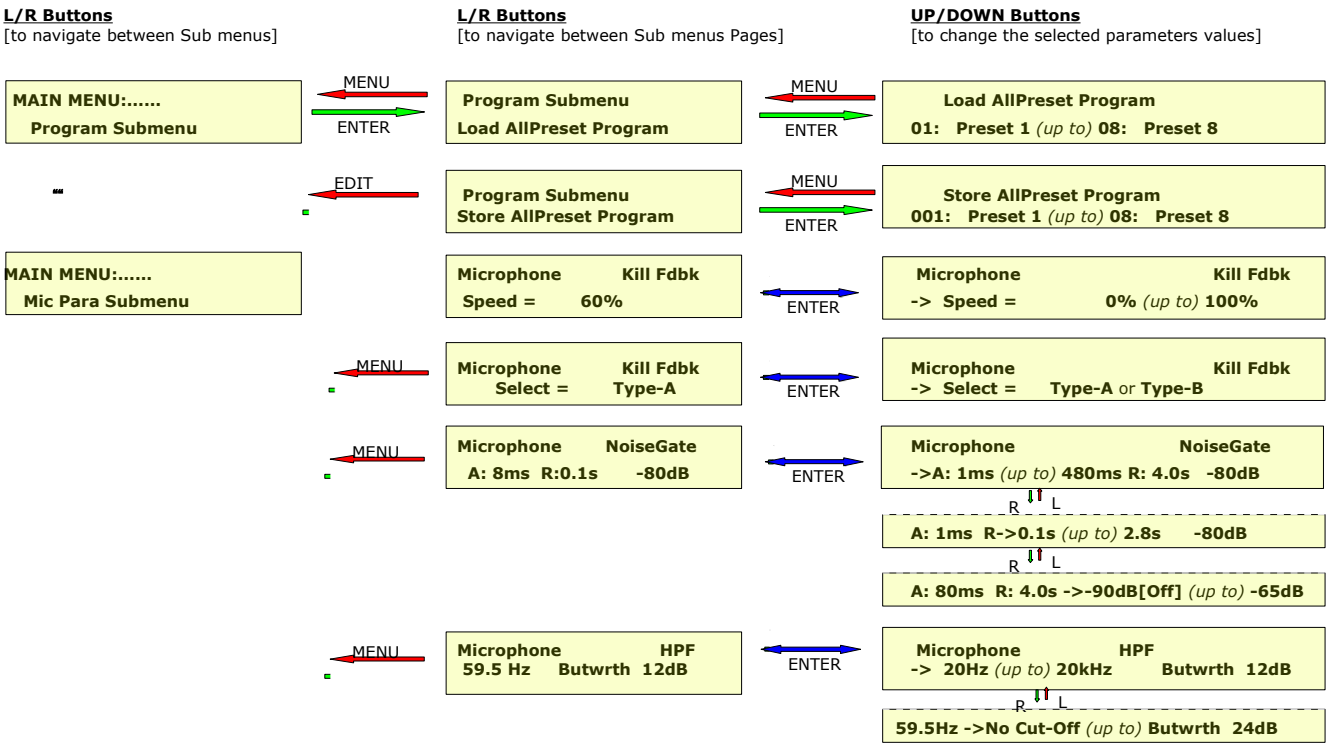
The KD-1540P is a Karaoke Processor allowing the user to control separately the processes related to the Audio path, to the Microphone (Voice) path and to the Effects applied to the Microphone path.
After the 2 previous screen shots, the last one will appear showing the last selected configuration, in terms of Audio, Microphone, Effects, level status, Audio Key Shift and Selected Input setting for the KD-1540P.
If the last configuration was i.e. "50%" level for the microphone, "60%" for the Audio, "30%" for Effects, "No Key Shift" for the Audio and "Input A" as the selected Input, then the screen, which is the "Normal Operation" screen, will be the following

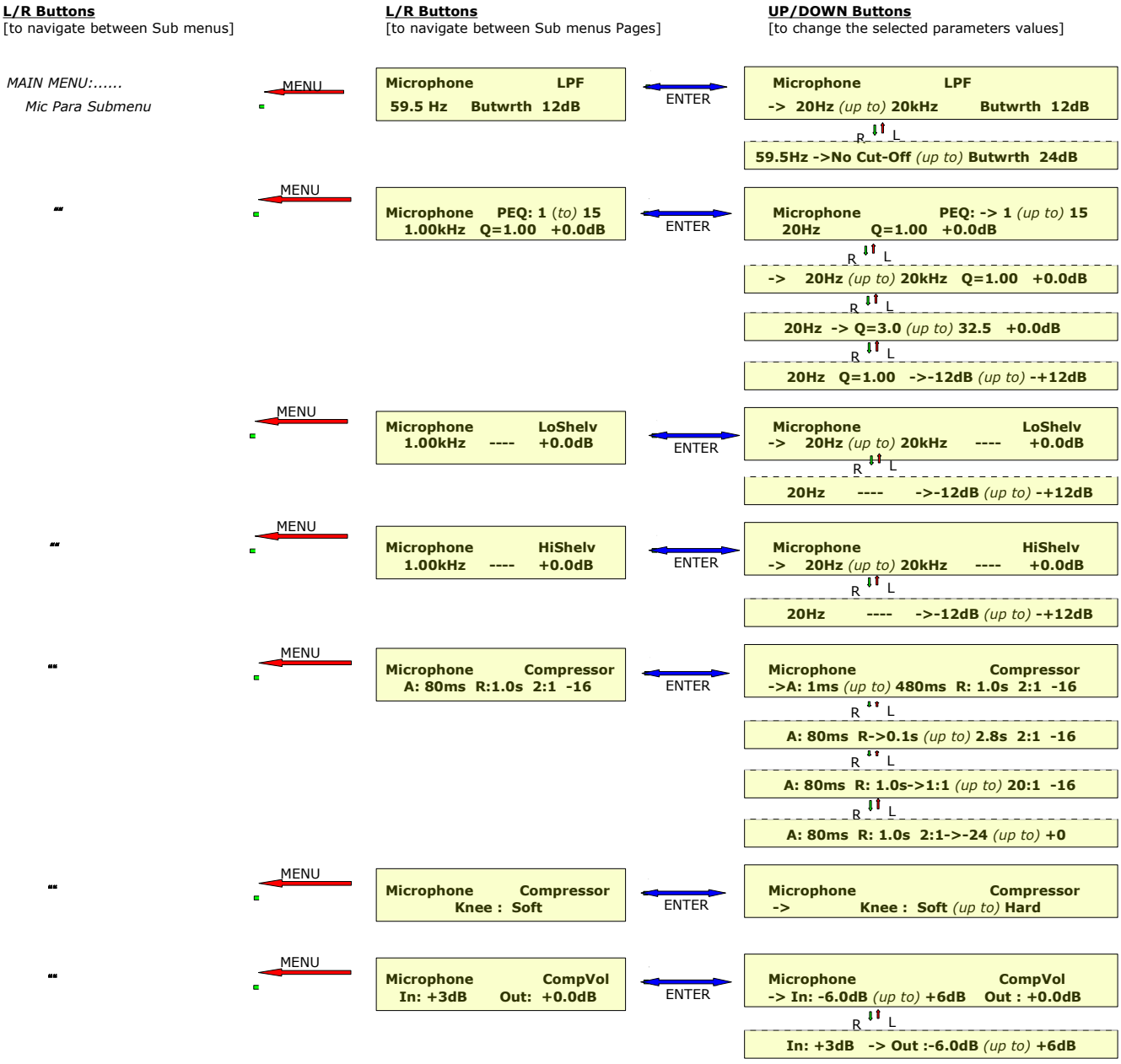
- ***Editing Section Controls Use***

The KD-1540P's Editing Section is equipped with 4 "Navigation" Buttons (Up, Down. L and R) and 2 more "EDIT" and "ENTER" buttons.
The unit is using these 6 buttons to access the several sub-menus allowing the unit's setting and the Music, Mic and Efx functions editing.
In details, the button "**EDIT**" allows to enter the unit's sub-menus, if coming from the previously described "Normal Operation" screen.
If already inside the editing menu, then the "EDIT" button will assume the function, if pressed, to go back to the previous edited page...up to the function of exiting the Editing environment.
The button "**ENTER**" allows the user to access the several Sub-Menus of the Editing environment.
Once inside the several Sub-Menus (accessible "vertically" with the "ENTER" button) to scroll "Horizontally" the several pages of the Sub-menus it is enough to use the buttons "L" and "R".
Once visualized the pages containing the parameters to edit, it is possible to enter it again using the "ENTER" button, then to change the parameters values using the "UP" and "DOWN" buttons or to move from one editable parameter and an other one using again the "L" and "R" buttons

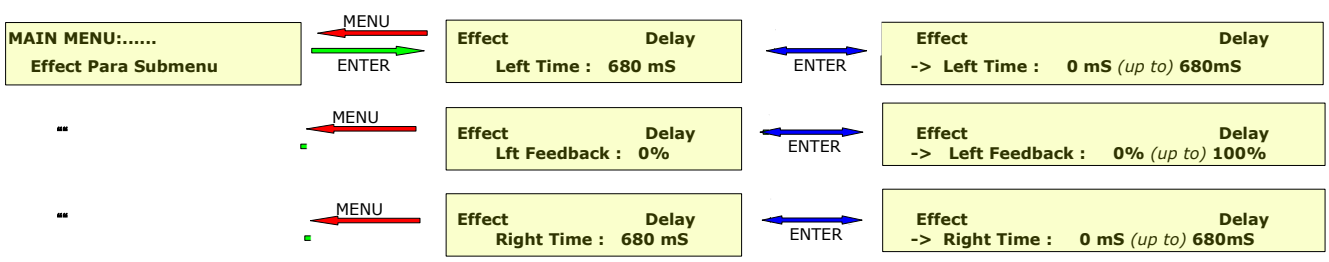
Starting from the "Normal Operation" screen coming after turning On the KD-1540P

The sub-menus accessible thanks to the "MENU", "ENTER", "L", "R", "UP" and "DOWN" buttons, are resumed by the following "trees" schemes, where the Main Menu is accessible from the "Normal Operation" Screen just pressing the "MENU" button:

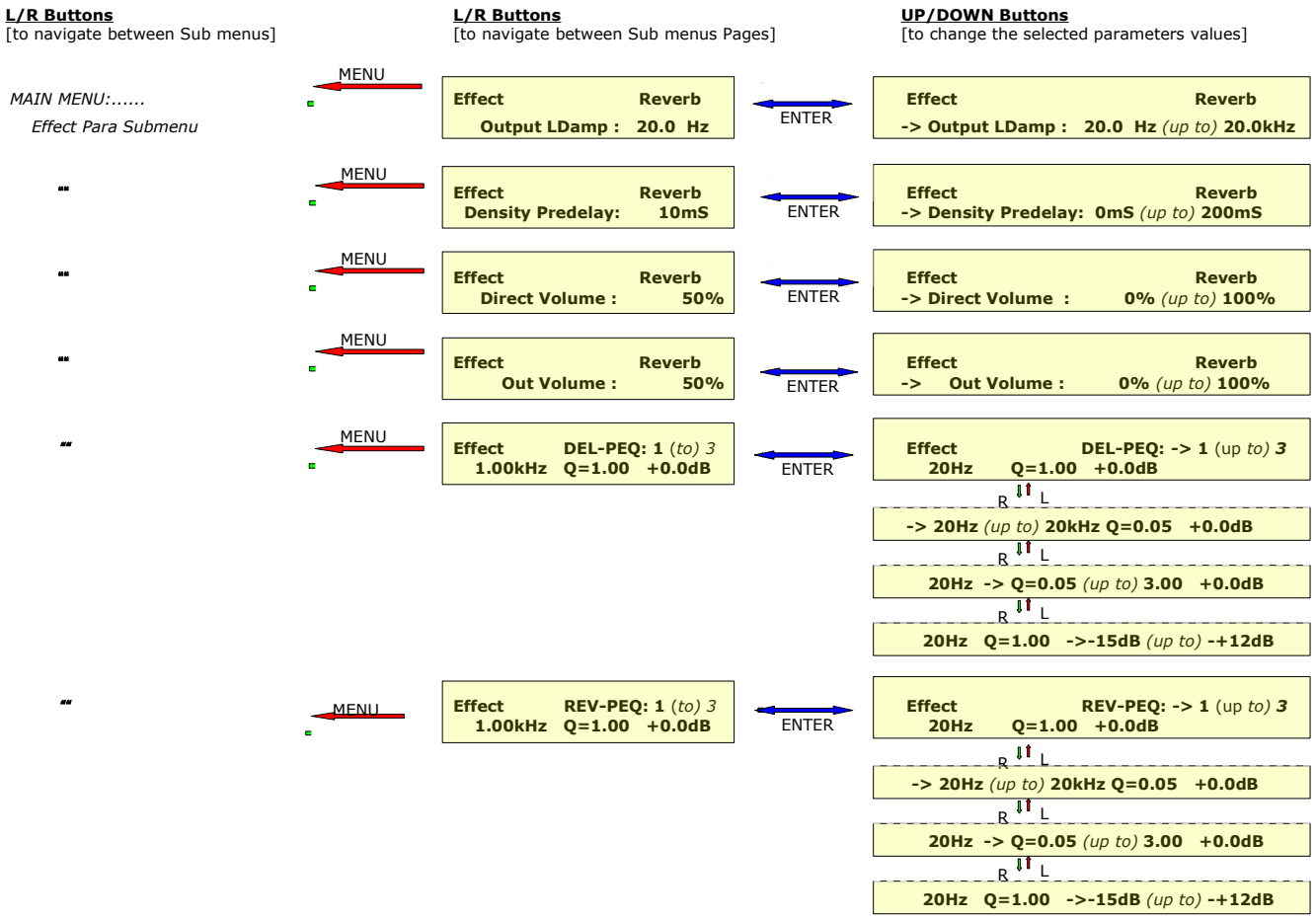



L/R Buttons
[to navigate between Sub menus]
L/R Buttons
[to navigate between Sub menus Pages]
UP/DOWN Buttons
[to change the selected parameters values]
MAIN MENU:.....
Mic Para Submenu
MENU
ENTER
Microphone LPF
59.5 Hz Butwrth 12dB
Microphone LPF
-> 20Hz (up to) 20kHz Butwrth 12dB
59.5Hz ->No Cut-Off (up to) Butwrth 24dB
Microphone PEQ: 1 (to) 15
1.00kHz Q=1.00 +0.0dB
Microphone PEQ: -> 1 (up to) 15
20Hz Q=1.00 +0.0dB
-> 20Hz (up to) 20kHz Q=1.00 +0.0dB
20Hz -> Q=3.0 (up to) 32.5 +0.0dB
20Hz Q=1.00 ->-12dB (up to) -+12dB
Microphone LoShelv
1.00kHz ---- +0.0dB
Microphone LoShelv
-> 20Hz (up to) 20kHz ---- +0.0dB
20Hz ---- ->-12dB (up to) -+12dB
Microphone HiShelv
1.00kHz ---- +0.0dB
Microphone HiShelv
-> 20Hz (up to) 20kHz ---- +0.0dB
20Hz ---- ->-12dB (up to) -+12dB
Microphone Compressor
A: 80ms R:1.0s 2:1 -16
Microphone Compressor
->A: 1ms (up to) 480ms R: 1.0s 2:1 -16
A: 80ms R->0.1s (up to) 2.8s 2:1 -16
A: 80ms R: 1.0s->1:1 (up to) 20:1 -16
A: 80ms R: 1.0s 2:1->-24 (up to) +0
Microphone Compressor
Knee : Soft
Microphone Compressor
-> Knee : Soft (up to) Hard
Microphone CompVol
In: +3dB Out: +0.0dB
Microphone CompVol
-> In: -6.0dB (up to) +6dB Out : +0.0dB
In: +3dB -> Out :-6.0dB (up to) +6dB

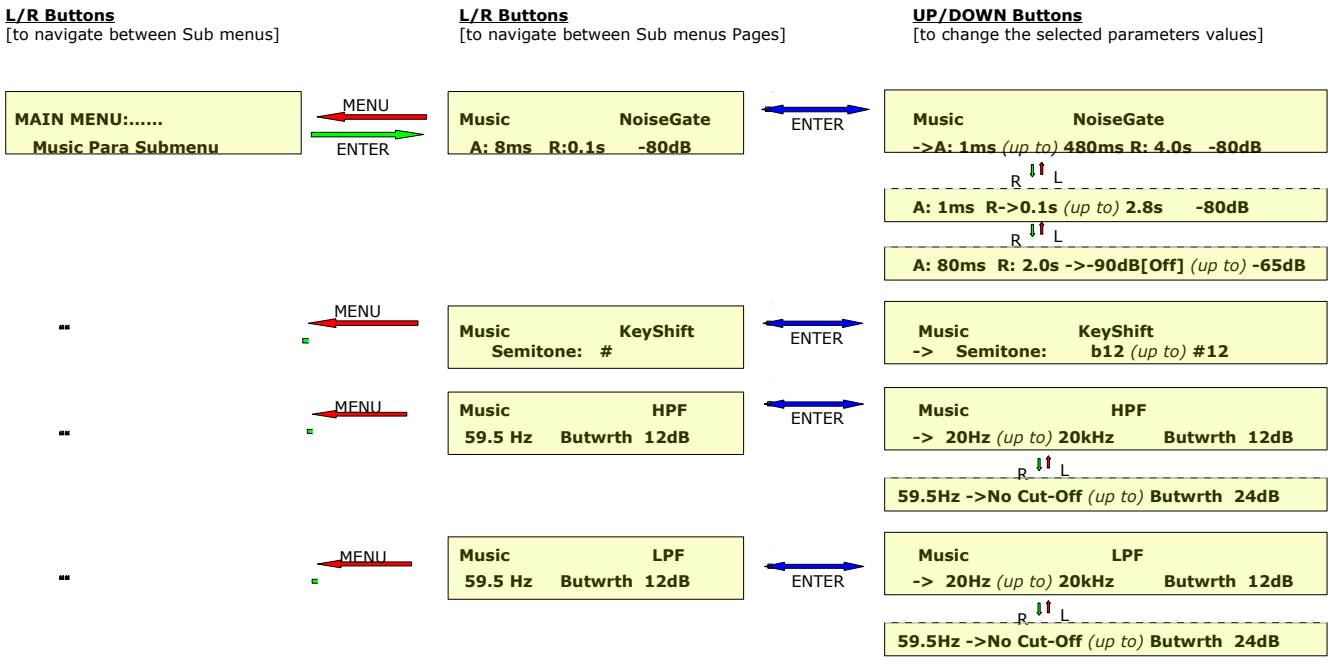
The ALL parameter accessible within the MIC PARA SUBMENU, can be quickly accessed without entering the MAIN MENU, just pressing the "MIC" button on the front panel in the EDIT section.

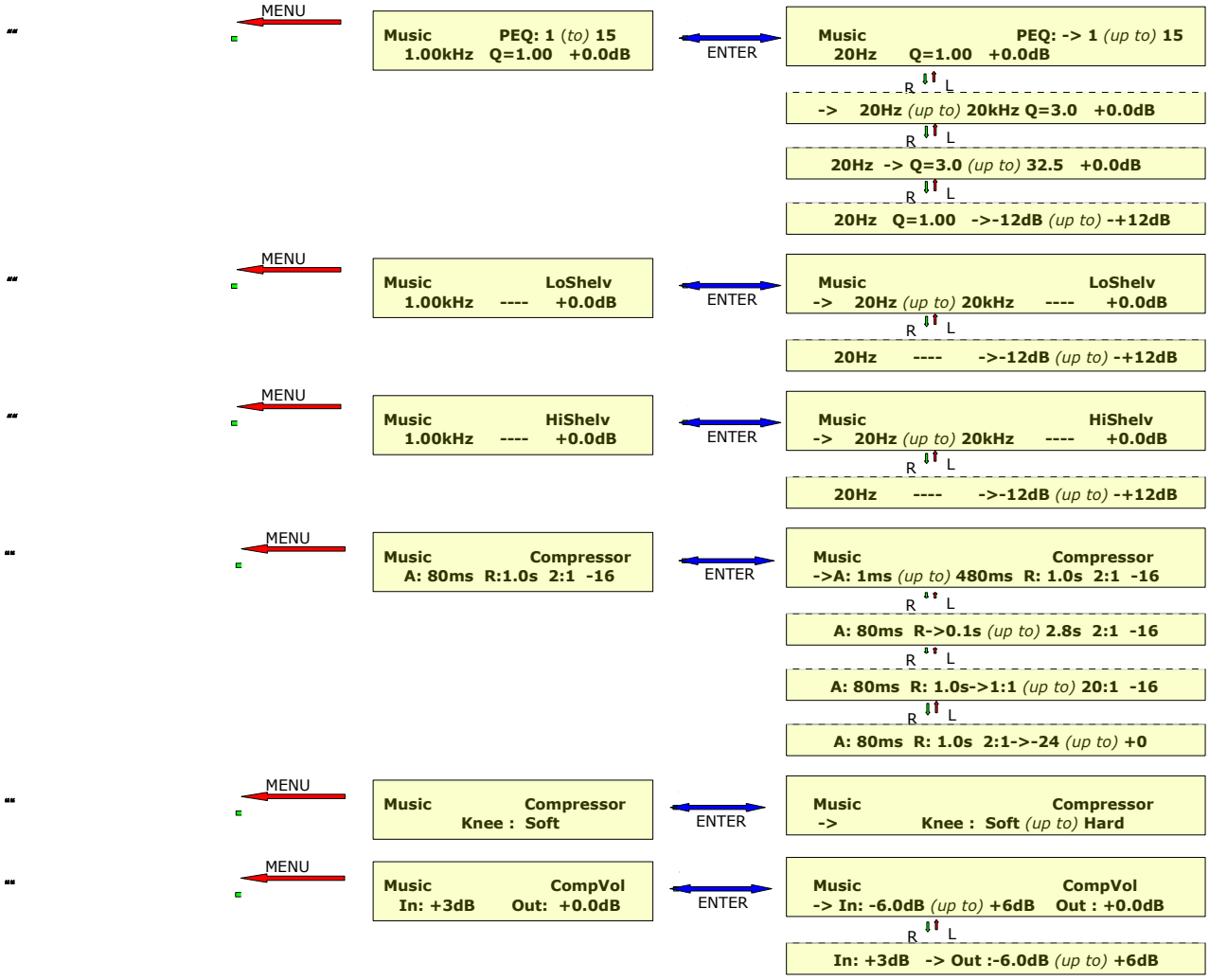


""	MENU	**Effect Delay** **Right Feedback : 0%**	ENTER	**Effect Delay** **-> Right Feedback : 0%** *(up to)* **100%**
""	MENU	**Effect Delay** **Center Time : 680 mS**	ENTER	**Effect Delay** **-> Center Time : 0 mS** *(up to)* **680mS**
""	MENU	**Effect Delay** **Center Feedback : 0%**	ENTER	**Effect Delay** **-> Center Feedback : 0%** *(up to)* **100%**
""	MENU	**Effect Delay** **Left Pan Left: 100%**	ENTER	**Effect Delay** **-> Left Pan Left: 0%** *(up to)* **100%**
""	MENU	**Effect Delay** **Left Pan Right: 0%**	ENTER	**Effect Delay** **-> Left Pan Right: 0%** *(up to)* **100%**
""	MENU	**Effect Delay** **Right Pan Left: 0%**	ENTER	**Effect Delay** **-> Right Pan Left: 0%** *(up to)* **100%**
""	MENU	**Effect Delay** **Right Pan Right: 100%**	ENTER	**Effect Delay** **-> Right Pan Right: 0%** *(up to)* **100%**
""	MENU	**Effect Delay** **Center Pan Left: 50%**	ENTER	**Effect Delay** **-> Center Pan Left: 0%** *(up to)* **100%**
""	MENU	**Effect Delay** **Center Pan Right: 50%**	ENTER	**Effect Delay** **-> Center Pan Right: 0%** *(up to)* **100%**
""	MENU	**Effect Delay** **Direct Volume : 10%**	ENTER	**Effect Delay** **-> Direct Volume : 0%** *(up to)* **100%**
""	MENU	**Effect Delay** **Direct**	ENTER	**Effect Delay** **PreDelay : 100mS ->Direct**
PreDelay : 0mS *(up to)* **150mS**				
no ""	MENU	**Effect Delay** **Percent**	ENTER	**Effect Delay** **Volume: 60% ->Percent**
Volume: 0% *(up to)* **100%**				
""	MENU	**Effect Delay** **Out Volume: 40%**	ENTER	**Effect Delay** **-> Out Volume: 0%** *(up to)* **100%**
""	EDIT	**Effect Reverb** **Decay : 70%**	ENTER	**Effect Reverb** **-> Decay : 0%** *(up to)* **100%**
""	MENU	**Effect Reverb** **PreDelay Time : 80mS**	ENTER	**Effect Reverb** **-> PreDelay Time : 0mS** *(up to)* **80mS**
""	MENU	**Effect Delay** **Density: 40%**	ENTER	**Effect Reverb** **-> Density : 0%** *(up to)* **100%**
""	MENU	**Effect Reverb** **Loop Highpass : 20.0 Hz**	ENTER	**Effect Reverb** **-> Loop Highpass : 20.0 Hz** *(up to)* **20.0kHz**
""	MENU	**Effect Reverb** **Loop Lowpass : 20.0kHz**	ENTER	**Effect Reverb** **-> Loop Lowpass : 20.0 Hz** *(up to)* **20.0kHz**
""	MENU	**Effect Reverb** **Output HDamp : 20.0kHz**	ENTER	**Effect Reverb** **-> Output HDamp : 20.0 Hz** *(up to)* **20.0kHz**


L/R Buttons
[to navigate between Sub menus]
L/R Buttons
[to navigate between Sub menus Pages]
UP/DOWN Buttons
[to change the selected parameters values]
MAIN MENU:.....
Effect Para Submenu
MENU
ENTER
Effect Reverb
Output LDamp : 20.0 Hz
-> Output LDamp : 20.0 Hz (up to) 20.0kHz
Effect Reverb
Density Predelay: 10mS
-> Density Predelay: 0mS (up to) 200mS
Effect Reverb
Direct Volume : 50%
-> Direct Volume : 0% (up to) 100%
Effect Reverb
Out Volume : 50%
-> Out Volume : 0% (up to) 100%
Effect DEL-PEQ: 1 (to) 3
1.00kHz Q=1.00 +0.0dB
Effect DEL-PEQ: -> 1 (up to) 3
20Hz Q=1.00 +0.0dB
R L
-> 20Hz (up to) 20kHz Q=0.05 +0.0dB
20Hz -> Q=0.05 (up to) 3.00 +0.0dB
20Hz Q=1.00 ->-15dB (up to) -+12dB
Effect REV-PEQ: 1 (to) 3
1.00kHz Q=1.00 +0.0dB
Effect REV-PEQ: -> 1 (up to) 3
20Hz Q=1.00 +0.0dB

The ALL parameter accessible within the EFFECT PARA SUBMENU, can be quickly accessed without entering the MAIN MENU, just pressing the "EFFECT" button on the front panel in the EDIT section.



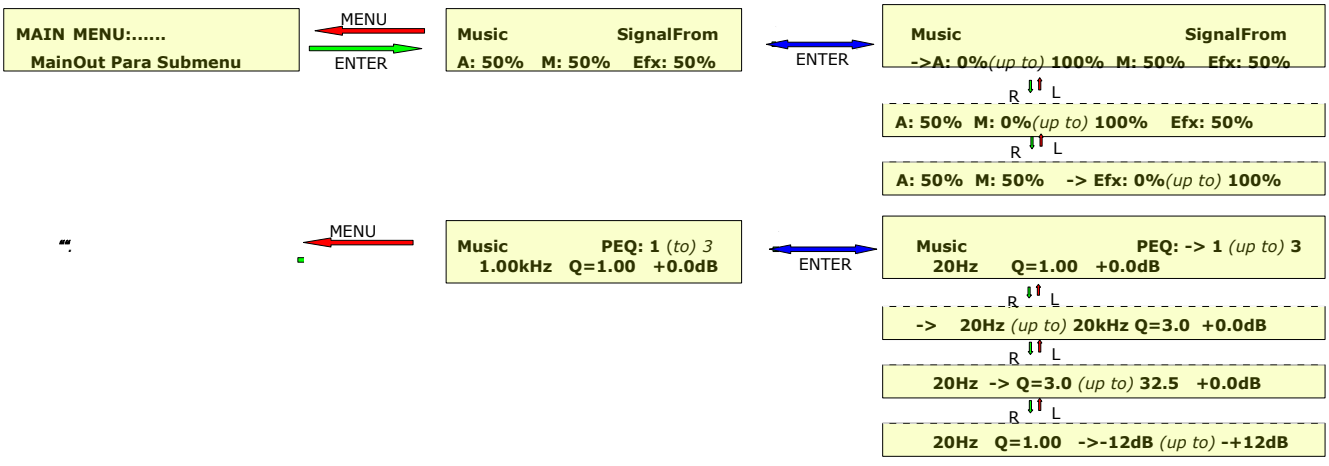


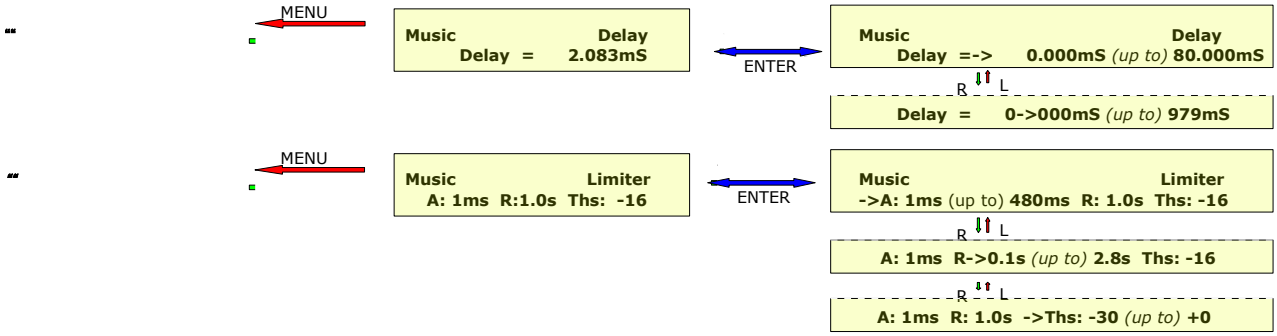
The ALL parameter accessible within the MUSIC PARA SUBMENU, can be quickly accessed without entering the MAIN MENU, just pressing the "MUSIC" button on the front panel in the EDIT section.

L/R Buttons
[to navigate between Sub menus]

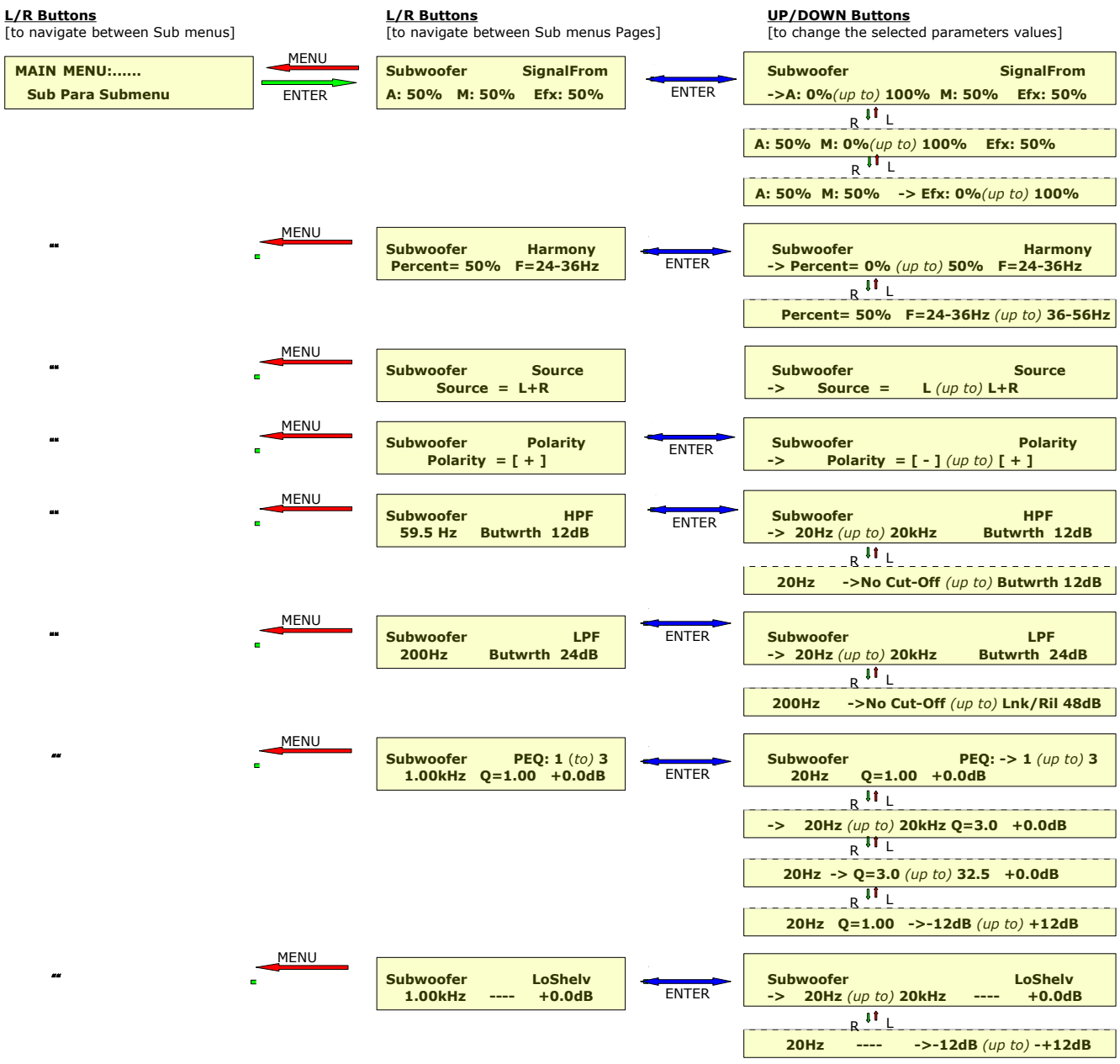
L/R Buttons
[to navigate between Sub menus Pages]

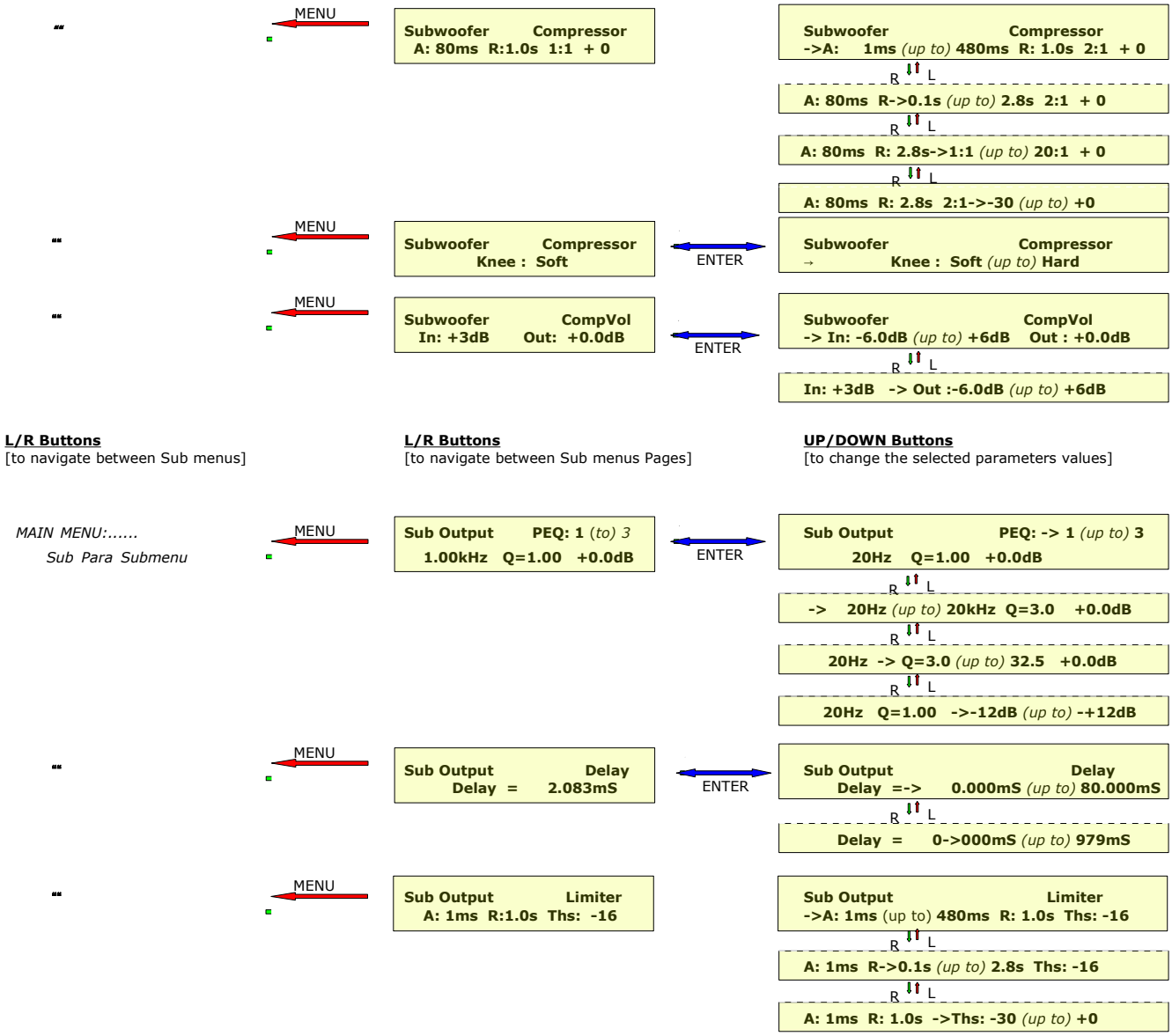
UP/DOWN Buttons
[to change the selected parameters values]





The ALL parameter accessible within the MAINOUT PARA SUBMENU, can be quickly accessed without entering the MAIN MENU, just pressing the "MAIN" button on the front panel in the EDIT section.



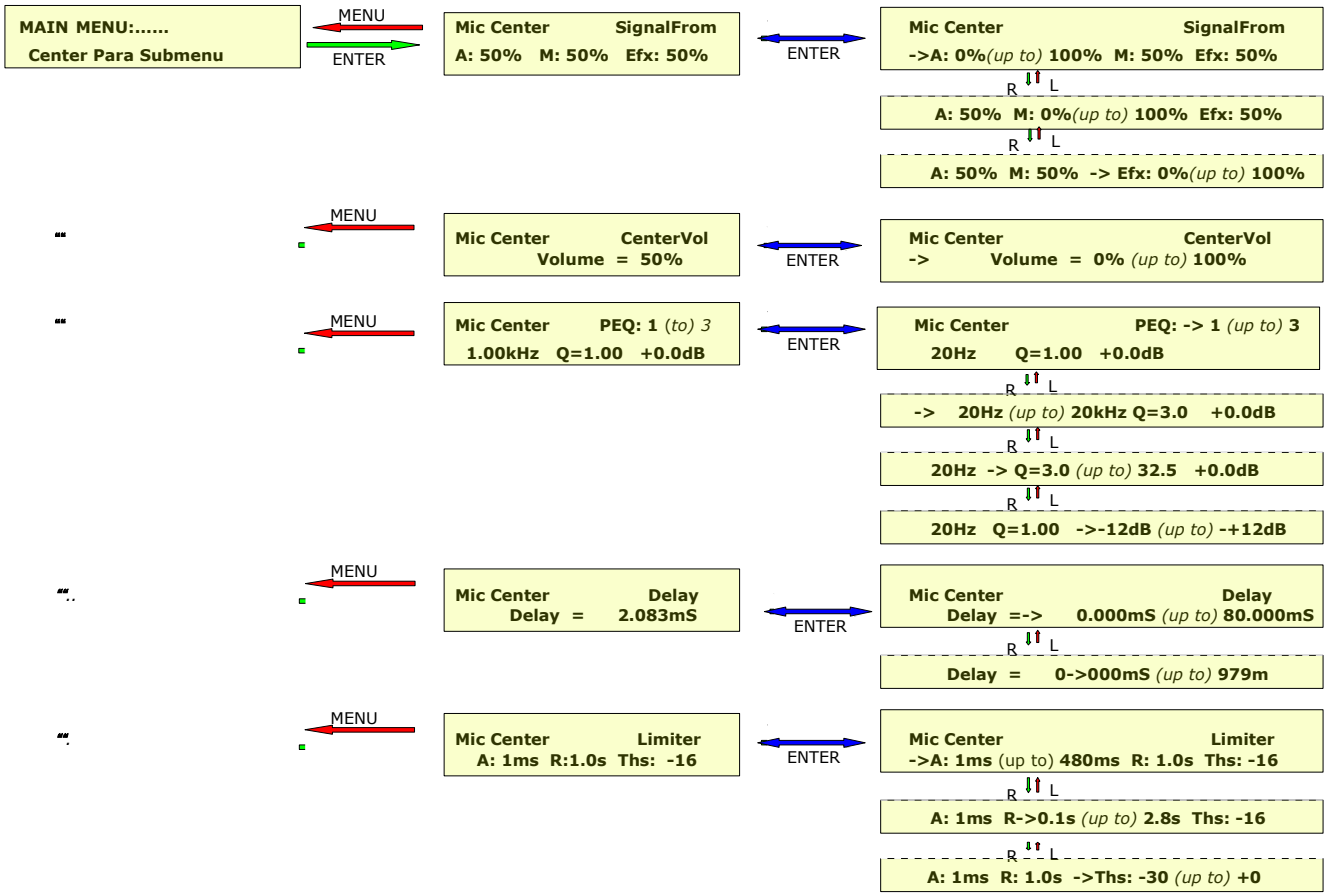


The ALL parameter accessible within the SUB PARA SUBMENU, can be quickly accessed without entering the MAIN MENU, just pressing the "SUB" button on the front panel in the EDIT section.

L/R Buttons
[to navigate between Sub menus]

L/R Buttons
[to navigate between Sub menus Pages]

UP/DOWN Buttons
[to change the selected parameters values]

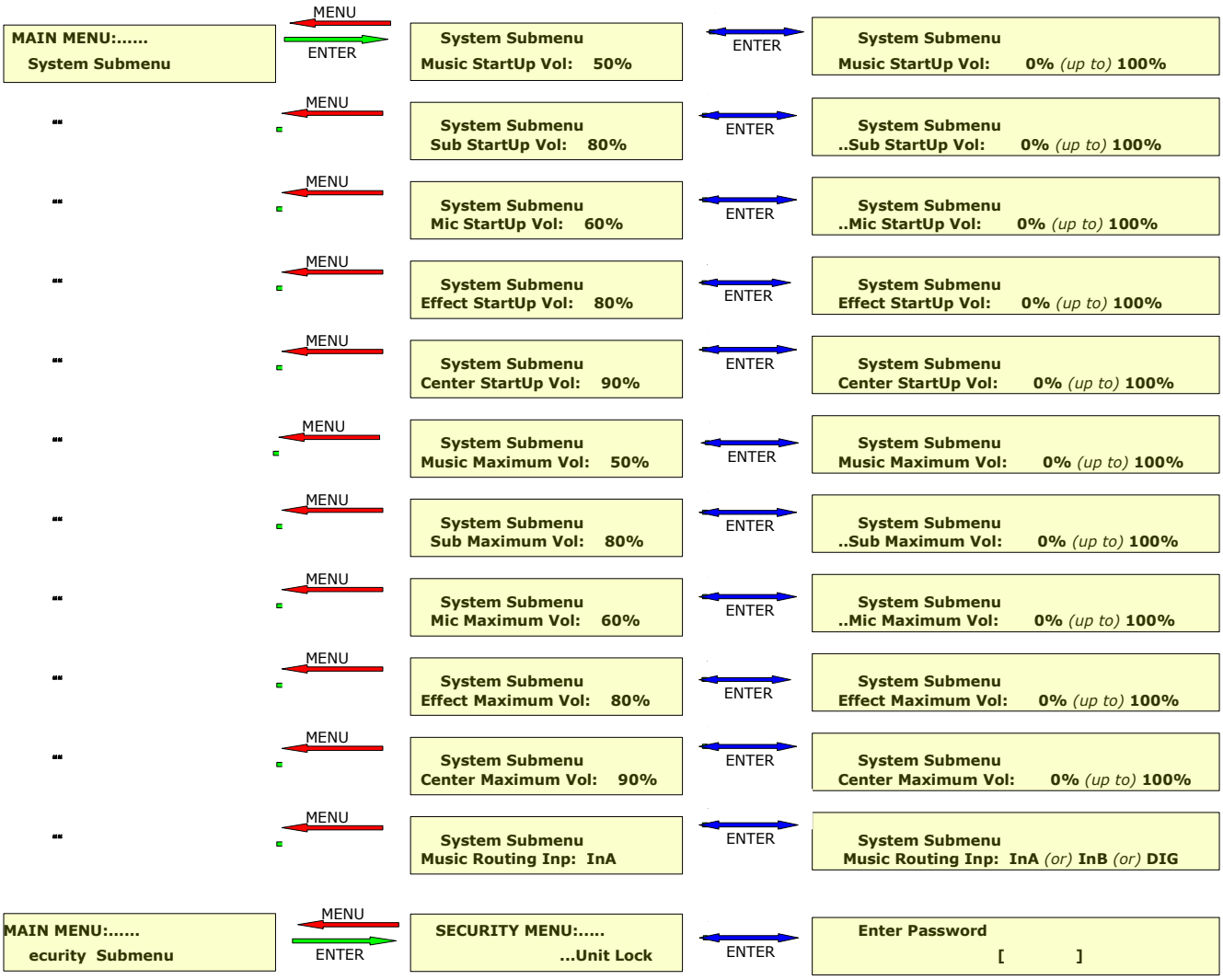


The ALL parameter accessible within the CENTER PARA SUBMENU, can be quickly accessed without entering the MAIN MENU, just pressing the "CENTER" button on the front panel in the EDIT section.

L/R Buttons
[to navigate between Sub menus]

L/R Buttons
[to navigate between Sub menus Pages]

UP/DOWN Buttons
[to change the selected parameters values]



- **Program Submenu: LOAD and STORE Functions**

Once edited a Microphone, Music or Effect configuration just using the steps described in the previous pages, it is then possible to save the configuration in 1 of 20 memory locations.
This means that the KD-1540P Digital Speaker Processor can store up to 20 presets created by the User for the Microphone, Music and Effect edited combination.
To Edit the Configurations, as we said , it is necessary to use the already described features of the KD-1540P, then to store the edited configurations as presets and to recall them, it is enough to use again the "**EDIT**" and "**ENTER**" buttons, together with the **L/R/Up/Down** ones..

Load AllPreset Program – this sub-menu allows the User to **Load** a previously stored **Combination of Music, Effect and Mic Editing**, on the KD-1540P and can be entered from the "Program Submenu" screen just pressing the "ENTER" button and looking for it using the L/R buttons.
Once selected the "Load AllPreset Program" sub-menu, the LCD screen will display the following

From the above screen, to access the "Preset Loading" page, press the "ENTER" button once more and the following screen will appear

Within this page it is possible to select one of the 20 available presets (previously stored by the user) scrolling through them using the Up/Down buttons.
If, i.e., the user want to select the preset number 4 "All 4", then pressing the Up button once, the following screen will show the "All 4" preset

If the User want to load on the KD-1540P the "All 4" preset, then it is enough from the above screen to press the "ENTER" button and the system will ask to confirm the choice.

If not sure about the choice, then pressing the "EDIT" button, it is possible to go back to the "Program Submenu - Load Effect Program" sub-menu, otherwise the above choice can be confirmed so to actually load the "All 4" preset on the KD-1540P.

From the above screen, then, confirming the choice pressing again the "ENTER" button, the system will briefly show the following screen notifying that the loading process is on the run

Then, the system will go back to the "Normal Operation" Screen, having updated it showing the new set of "Levels" for Mic, Center, Music, Efx and Sub.

Note: the selection and loading of the presets can also be done using the "UP", "DOWN" and "LOAD" buttons on the KD-1540P front panel.
Particularly, pressing the LOAD button, the "Load AllPreset Program" page is entered

With the "UP" and "DOWN" buttons, the available presets can be scrolled.
Once selected the desired preset, pressing the "LOAD" button and confirming the choice pressing the "LOAD' button again, the preset will be loaded. (See next paragraph **'Other Front Panel Controls')**

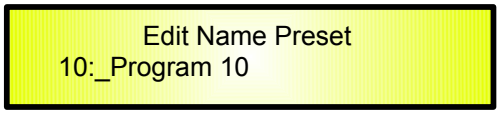
Store AllPreset Program – this sub-menu allows the User to **Store** a new **Combination of Music, Effect and Mic Editing**, on the KD-1540P and can be entered from the "Program Submenu" screen just pressing the "ENTER" button and looking for it using the L/R buttons.
The Stored Combination is composed by the CURRENTLY SET OF PARAMETERS for the Music, Effect and Mic Sections screen.
Once entered the "Store AllPreset Program" sub-menu, the LCD screen will display the following

From the above screen, to access the "Combination Preset Storing" page, press the "ENTER" button once more and the following screen will appear

Within this page it is possible to select one of 20 available locations for storing a new combination preset, scrolling through them using the Up/Down buttons.

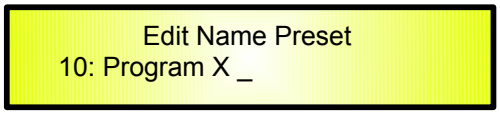
If, i.e., the user want to select the location number 10, then pressing the Up button 9 times, the following screen will show the selected location and the eventually previously stored preset

If not sure about the choice, then pressing the "EDIT" button, it is possible to go back to the "Program Submenu - Store AllPreset Program" sub-menu.
If the choice to store the new presets' combination will be confirmed by pressing the "ENTER" button, then the "Edit Name Preset" page will be entered, where the user can select a 16 characters name for the new preset

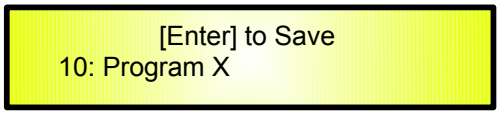


Once entered the "Edit Name Preset" page, a 16 characters field, eventually containing already the former preset name, will appear and inside it a "blinking down score" will indicate the place where the next character will be placed.
The character can be selected using the Up/Down buttons.
Once placed the character, to move to the next one it is necessary to use the L/R buttons.
The "blinking down score" will move on the place that will "guest" the next character.
In the above way the new preset's name can be set.

In example, if the new preset name will be "**Program X**", then the screen, after written it, will be the following

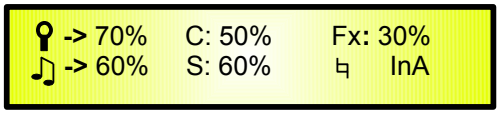


If the written name is correct and the user want to proceed with the "named preset" storing, then pressing the "ENTER" button the following page will be accessed



From the above screen, then, confirming the choice pressing again the "ENTER" button, the system will briefly show the following screen notifying that the loading process is on the run

Now, the location number 10 of the AllPreset presets is containing the new Presets' Combination named "Program X".
After the previous operation, the system will go back to the "Normal Operation" Screen, showing the currently selected parameters...which are the ones stored in the Program X.

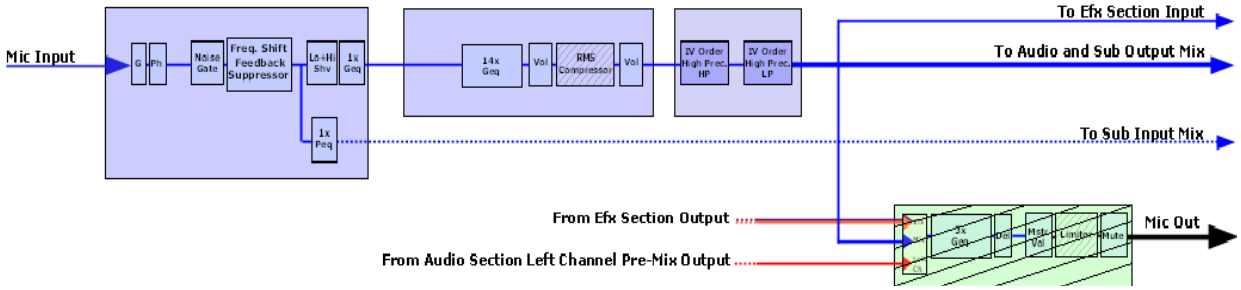


- **Mic Para Submenu: Microphone Signal Processes Section**

From the "Normal Operation" screen, it is possible to access the "Mic Para Submenu" using the "EDIT" button and selecting the "Mic Para Submenu" using the L/R buttons to scroll between the several Sub menus.
The Microphone Para Submenu can also be accessed QUICKLY just pressing the "MIC" button in the "EDIT" section of the KD-1540P Front Panel.

Once selected the "Mic Para Submenu", using the "ENTER" an "L/R" buttons it is possible to access the several pages of the Submenu, so as to enter them for the parameters' editing, which values can be modified by the "Up/Down" buttons.
Note1: in the all pages' options, the all possible selections can be selected as said by the "Up/Down" buttons and the current shown value of the selected options is AUTOMATICALLY loaded during the "Up/Down" use and stored as current value once left the page.
In the following ALL Pages, once selected the desired option and modified it, the modification is automatically accepted as current one during the selection itself and stored in the KD-1540P system status once left the page.

Microphone Signal Input/Output Path Block Scheme

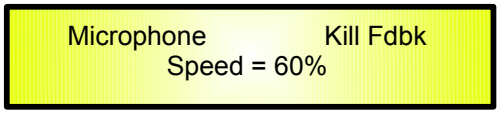


Referring to the previous block scheme, here below the description of the "Mic Para Submenu" pages:

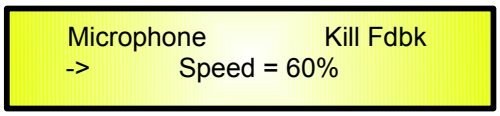
Microphone Kill Fdbk – On the microphone path, the KD-1540P is implementing a powerful "Feedback Eliminator" process based on 2 different algorithms, selectable by the user:

1. an "added Delta F" algorithm [Type-A], shifting the original band of a certain amount of frequency, which can be set with "continuity" by the user from 0 up to 7.5Hz in 100 steps.
2. a pitch shifter algorithm [Type-B], translating the original signal band "Down" of a desired percentage which can be set with "continuity" by the user from 0 up to 1,13% in 100 steps.

This following page allows to set the so called "SPEED" of the Frequency shift.
The choice to use as name of the parameter "Speed" is due to the intuitive understanding that can be achieved just looking at the oscilloscope the original signal and the shifted one: if using a sinusoid, just going from 0 up to the maximum "speed", the frequency shifted sinusoid will appear moving faster and faster compared to the "static" original one, used as reference for the synch.
Once entered the page, the LCD screen will display the following



Pressing once more the "ENTER" button, it is possible to edit the page's parameters and the above window will be appear as follow

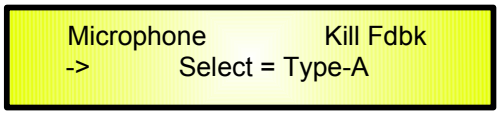


Operating on the SPEED parameter, the frequency shift applied to the band is depending from the selected Type of Feedback Elminator (see later)

Speed [Type-A] – Amount of "constant" Frequency shift operated on the processed signal respect the original one, ranging from 0% (No Frequency Shift) and 100% (Original band + Delta F Shift).
So, i.e. a 1000kHz signal at Speed=100% will be shifted down to 992.5Hz, and a 2kHz signal, to 1.9925Hz.

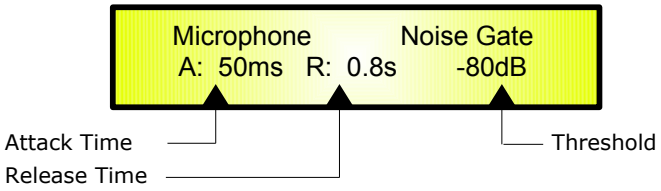
Speed [Type-B] – Amount of Frequency shift operated on the processed signal respect the original one, ranging from 0% (No Frequency Shift) and 100% (1,13% Band Shift).
So, i.e. a 1000kHz signal at Speed=100% will be shifted down of the 1.13%, which is 1000-(1000*0.013) = 988.7Hz.

Select – within the "Select" page, the desired Feedback Elminator Type can be selected



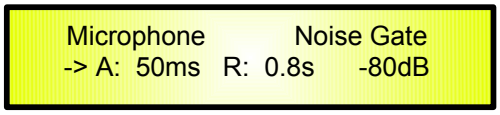
Type-A: "added Delta F" algorithm, shifting the original band of a certain amount of frequency, which can be set with "continuity" by the user from 0 up to 7.5Hz "Down" in 100 steps.
Type-B: "pitch shifter algorithm" [Type-B], translating the original signal band "Down" of a desired percentage which can be set with "continuity" by the user from 0 up to 1,13% in 100 steps.

Microphone Noise Gate – this page allows to adjust the parameters of the available Noise Gate on the microphone input path.
The LCD screen will display the following



As described already in the editing section command "tree", the parameters within the Submenu page can be accessed pressing the "ENTER" button.
Once one parameter is selected, then at its side will appear a small "arrow".
Once the arrow is aside the parameter, its values can be modified by the "Up/Down" buttons.
If, in example, we selected the Attack time.

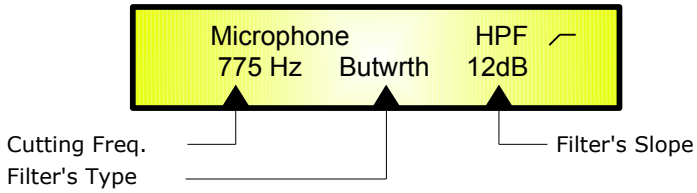
The above window will be appear as follow



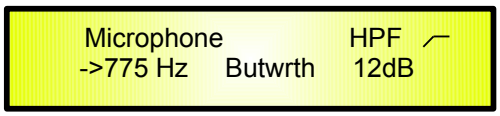
The Attack time of the Noise Gate, then, can be set by the "Up/Down" buttons.
Once set the Attack time, the Release time and Threshold, can be selected using the "L/R" buttons and their values again adjusted by the "Up/Down" buttons.

Attack Time [A] – the range of the selectable Noise Gate's Attack Time is going from 1ms to 480ms by steps of 1ms from 1ms to 20ms, 5ms from 20ms to 30ms, 10ms from 30ms to 100ms, 20ms from 100ms to 200ms, then a 240ms, 300ms and 400ms are available before 480ms.
The Noise Gate's Attack Time is representing the time taken by the Noise Gate to "close" the output level after detected the lack of input signal and can be accessed from the "Microphone Noise Gate" page, just pressing the "ENTER" button.
Release Time [R] – the range of the selectable Compressor's Release Time is going from 10ms to 280ms by steps of 10ms.
The Noise Gate's Release Time is representing the time taken by the Noise Gate to exit from the Output Muted condition after detected an input signal and can be accessed coming from the previous selection of the Attack Time, just pressing the"R" button (from the Release time it is possible to go back to the Attack time, pressing the "L" button).
Threshold – the range of the selectable Noise Gate's Threshold is going from less than -90dB (Noise Gate OFF) up to -65dB by steps of 1 dB and can be accessed coming from the previous selection of the Release Time, just pressing the"R" button.

Microphone HPF – this page allows to adjust the Second order HP filter available on the microphone's input path.
Once entered the page, the LCD screen will display the following

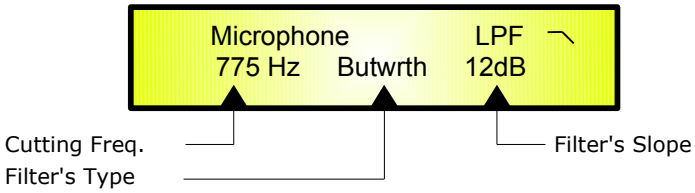


Pressing once more the "ENTER" button, it is possible to edit the page's parameters and the above window will be appear as follow

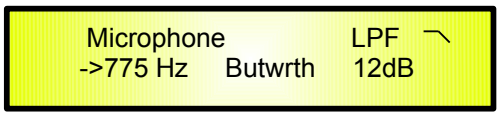


Cutting Freq. – the available values of the High Pass Filter's Low Cut Frequency are ranging from 20Hz up to 20kHz by steps of 1/12 of Oct.
The HP Low Cut Frequency can be accessed from the "Microphone HPF" page, just pressing the "ENTER" button.
Filter Slope – the High Pass Filter's slope can range from the "No Cut-Off" (filter bypassed) up to a 24dB/Oct (fourth order filter).
The HP Low Cut Frequency can be accessed coming from the previous selection of the Cutting Freq., just pressing the"R" button

Microphone LPF – this page allows to adjust the Second order LP filter available on the microphone's input path.
Once entered the page, the LCD screen will display the following



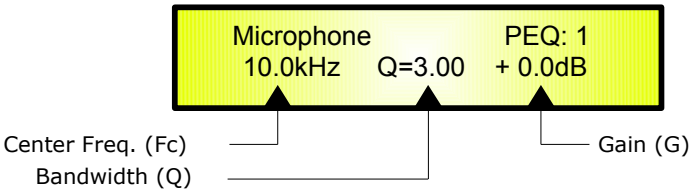
Pressing once more the "ENTER" button, it is possible to edit the page's parameters and the above window will be appear as follow



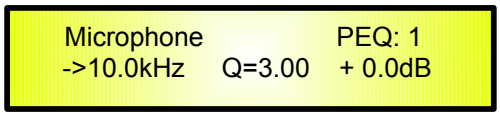
Cutting Freq. – the available values of the Low Pass Filter's Low Cut Frequency are ranging from 20Hz up to 20kHz by steps of 1/12 of Oct.
The LP High Cut Frequency can be accessed from the "Microphone LPF" page, just pressing the "ENTER" button.
Filter Slope – the Low Pass Filter's slope can range from the "No Cut-Off" (filter bypassed) up to a 24dB/Oct (fourth order filter).
The LP Low Cut Frequency can be accessed coming from the previous selection of the Cutting Freq., just pressing the"R" button

Microphone PEQ: 1 *(to)* ***PEQ: 15*** – here we have 15 pages with the same characteristics, allowing to adjust 15 Peaking Filters, available on the microphone's input path.

Peaking Filters - Once entered the pages, the LCD screen will display the following, if i.e. We want to set the Peaking Filter as Filter number 1



Pressing once more the "ENTER" button, it is possible to edit the page's parameters and the above window will be appear as follow

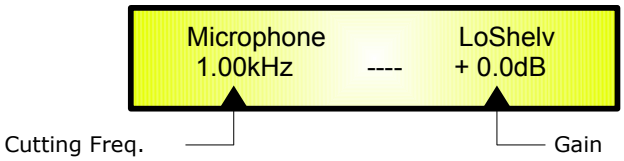


Center Freq. (Fc) – this is the Peaker Filter's Center Frequency and the range of the available values is going from 20Hz up to 20kHz by steps of 1/12 of Oct.
The Center Frequency can be accessed from the "Microphone PEQ: X" page, just pressing the "ENTER" button.

Quality Factor (Q) – this is the Peaking Filter's Q and can range from the "3.0" up to "32.5" by steps of 0.05.
The Bandwidth can be accessed coming from the previous selection of the Center Freq., just pressing the"R" button
Gain (G) – this is the Peaking Filter's Gain and can range from the -12dB up to +12dB by steps of 0.5dB.
The Peaking filter's Gain can be accessed coming from the previous selection of the Q, just pressing the"R" button

Microphone LoShelv – here we have the page, allowing to adjust a Low Shelving Filter, available on the microphone's input path.

Low Shelving Filter – the following page allows to adjust the Low Shelving Filter, available on the microphone's input path.
Once entered the page of the 2nd Order Low Shelving Filter, the LCD screen will display the following

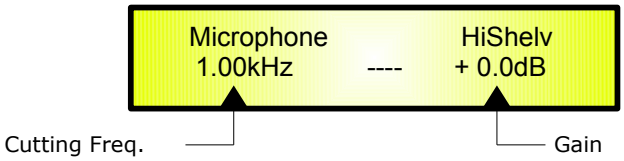


Pressing once more the "ENTER" button, it is possible to edit the page's parameters and the above window will be appear as follow

Cutting Freq. – the available parameter of the Low Shelving Filter's Cutting Frequency is ranging from 20Hz up to 20kHz by steps of 1/12 of Oct.
Gain – the Low Shelving Filter's Gain can range from -12dB up to +12dB by steps of 0.5dB.
The Low Shelving Filter's Gain can be accessed coming from the previous selection of the Cutting Freq., just pressing the"R" button

Microphone HiShelv – here we have the page, allowing to adjust a High Shelving Filter, available on the microphone's input path.

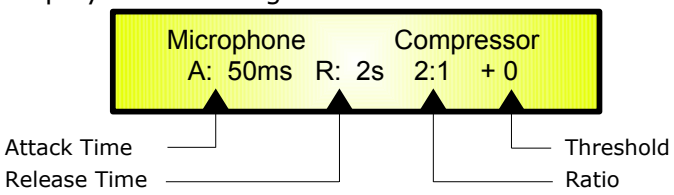
Low Shelving Filter – the following page allows to adjust the High Shelving Filter, available on the microphone's input path.
Once entered the page of the 2nd Order High Shelving Filter, the LCD screen will display the following



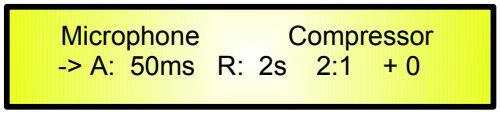
Pressing once more the "ENTER" button, it is possible to edit the page's parameters and the above window will be appear as follow

Cutting Freq. – the available parameter of the High Shelving Filter's Cutting Frequency is ranging from 20Hz up to 20kHz by steps of 1/12 of Oct.
Gain – the High Shelving Filter's Gain can range from -12dB up to +12dB by steps of 0.5dB.
The Low Shelving Filter's Gain can be accessed coming from the previous selection of the Cutting Freq., just pressing the"R" button

Microphone Compressor [1/2] – this page allows to adjust the parameters of the available RMS Compressor on the microphone input path.
The LCD screen will display the following



Once one parameter is selected, then at its side will appear a small "arrow".
Once the arrow is aside the parameter, its values can be modified by the "Up/Down" buttons.
If, in example, we selected the Attack time, the above window will appear as follow,

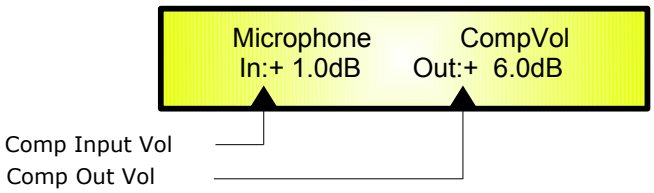


The Attack time of the compressor, then, can be set by the "Up/Down" buttons.
Once set the Attack time, the Release time, Ratio and Threshold, can be selected using the "L/R" buttons and their values again adjusted by the "Up/Down" buttons.

Attack Time [A] – the range of the selectable Compressor's Attack Time is going from 1ms to 480ms by steps of 1ms from 1ms to 20ms, 5ms from 20ms to 30ms, 10ms from 30ms to 100ms, 20ms from 100ms to 200ms, then a 240ms, 300ms and 400ms are available before 480ms.
The Compressor's Attack Time can be accessed from the "Microphone Compressor" page, just pressing the "ENTER" button.
Release Time [R] – the range of the selectable Compressor's Release Time is going from 100ms to 2.8S by steps of 100ms.
The Compressor's Release Time can be accessed coming from the previous selection of the Attack Time, just pressing the"R" button (from the Release time it is possible to go back to the Attack time, pressing the "L" button).
Ratio – The range of the selectable Compressor's Ratio is going from 1:1 (no Compression), up to 20:1; the Compressor's Ratio can be accessed coming from the previous selection of the Release Time, just pressing the"R" button (from the Ratio it is possible to go back to the Release time, pressing the "L" button).
Threshold – the range of the selectable Compressor's Threshold is going from +0dB (Compressor not active) up to -24dB by steps of 1 dB and can be accessed coming from the previous selection of the Ratio, just pressing the"R" button.

Microphone Compressor [2/2] – this page allows to chose the "Knee" type for the RMS compressor, editable in the following Page.
The Knee can be selected to be Hard (immediate compression after the threshold) or Soft (the compression start smoothly before the selected Threshold).
If selected the Soft Knee, the LCD screen will display the following

Microphone CompVol – this page allows to adjust the microphone's compressor input/output levels.
Once entered the page, the LCD screen will display the following



Pressing once more the "ENTER" button, it is possible to edit the page's parameters and the above window will be appear as follow

In – this is the Input Level parameter and the range of the available values is going from -6dB up to +6dB by steps of 0.5dB.
The Compressor's Input Level can be accessed from the "Microphone CompVol" page, just pressing the "ENTER" button.

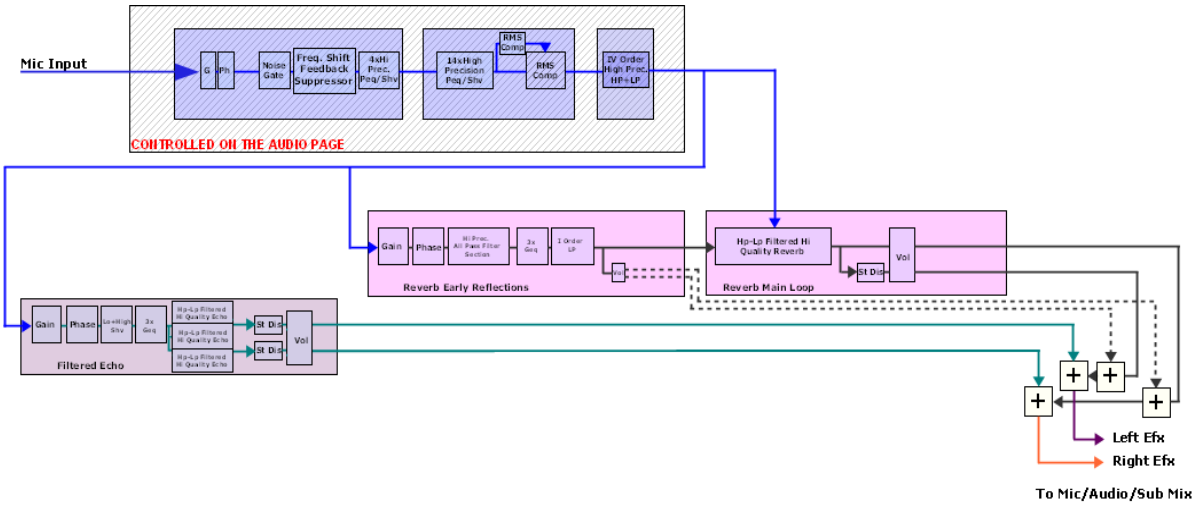
Out – this is the Output Level parameter and the range of the available values is going from -6dB up to +6dB by steps of 0.5dB.
The Compressor's Output Level can be accessed coming from the previous selection of the "In" level, just pressing the"R" button.

- **Effect Para Submenu: Effects Editing Section**

From the "Normal Operation" screen, it is possible to access the "Effect Para Submenu" using the "EDIT" button and selecting the "Effect Para Submenu" using the L/R buttons to scroll between the several Sub menus.
The Effect Para Submenu can also be accessed QUICKLY just pressing the "EFFECT" button in the "EDIT" section of the KD-1540P Front Panel.

Once selected the "Effect Para Submenu", using the "ENTER" an "L/R" buttons it is possible to access the several pages of the Submenu, so as to enter them for the parameters' editing, which values can be modified by the "Up/Down" buttons.
Note 1: in the all pages' options, the all possible selections can be selected as said by the "Up/Down" buttons and the current shown value of the selected options is AUTOMATICALLY loaded during the "Up/Down" use and stored as current value once left the page.
In the following ALL Pages, once selected the desired option and modified it, the modification is automatically accepted as current one during the selection itself and stored in the KD-1540P system status once left the page.
Note 2: The Effect Para Submenu's pages no need to be entered by the "ENTER" button to be edited, containing those pages just one parameter to be edited.
Once selected the desired page for editing using the L/R buttons, then it is enough to use the Up/Down buttons to set the parameter's value.

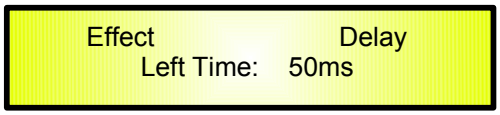
Effect Signal Input/Output Path Block Scheme



Referring to the previous block scheme, here below the description of the "Effect Para Submenu" pages:

Effect Delay Pages – the KD-1540P Delay it is a pretty advanced one.
The delay is a REAL 3 TAPS one, so performing 3 independent Delays that can be pan-potted on the Left and Right channel as desired by the user.
More, the Direct sound can be added to the delaied one with its own Pre-Delay and level.
For the 3 Taps Delay, we have 10 pages containing the Delay process editable parameters.
The 15 pages are the following:

Left Time – parameter setting the Delay Time of the Left Channel's Delay (Tap Delay 1), ranging from 0ms up to 680ms by steps of 10ms
The LCD screen will display the following



Left Feedback – parameter setting the Feedback % of the Left Channel's Delay (Tap Delay 1), ranging from 0% up to 100% by steps of 1%
The LCD screen will display the following

Right Time – parameter setting the Delay Time of the Right Channel's Delay (Tap Delay 2), ranging from 0ms up to 680ms by steps of 10ms
The LCD screen will display the following

Right Feedback – parameter setting the Feedback % of the Right Channel's Delay (Tap Delay 2), ranging from 0% up to 100% by steps of 1%
The LCD screen will display the following

Center Time – parameter setting the Delay Time of the Right Channel's Delay (Tap Delay 3), ranging from 0ms up to 680ms by steps of 10ms
The LCD screen will display the following

Center Feedback – parameter setting the Feedback % of the Right Channel's Delay (Tap Delay 3), ranging from 0% up to 100% by steps of 1%
The LCD screen will display the following

Left Pan Left – parameter setting the Percentage of Left Channel's Delay (Tap Delay 1), on the Delay Left Output Channel, ranging from 0% up to 100% by steps of 1%
The LCD screen will display the following

Left Pan Right – parameter setting the Percentage of Left Channel's Delay (Tap Delay 1), on the Delay Right Output Channel, ranging from 0% up to 100% by steps of 1%
The LCD screen will display the following

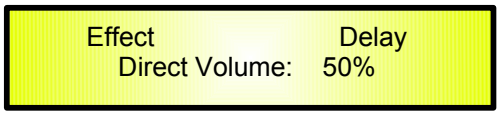
Right Pan Left – parameter setting the Percentage of Right Channel's Delay (Tap Delay 2), on the Delay Left Output Channel, ranging from 0% up to 100% by steps of 1%
The LCD screen will display the following

Right Pan Right – parameter setting the Percentage of Right Channel's Delay (Tap Delay 2), on the Delay Right Output Channel, ranging from 0% up to 100% by steps of 1%
The LCD screen will display the following

Center Pan Left – parameter setting the Percentage of Center Channel's Delay (Tap Delay 3), on the Delay Left Output Channel, ranging from 0% up to 100% by steps of 1%
The LCD screen will display the following

Center Pan Right – parameter setting the Percentage of Center Channel's Delay (Tap Delay 3), on the Delay Right Output Channel, ranging from 0% up to 100% by steps of 1%
The LCD screen will display the following

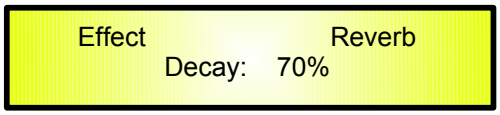
Direct Volume – parameter setting the Direct Signal Volume summed to the Left/Right Outputs of the Stereo Delay.
The Direct Volume can be set between 0% (Direct Muted) up to 100% (Direct fully "added" to the Stero Delay Outputs) by steps of 1%.
The LCD screen will display the following



Direct PreDelay Time – parameter setting the Pre-Delay Time of the Direct signal summed to the Left/Right Outputs of the Stereo Delay, ranging from 0ms up to 150ms by steps of 1ms.
The LCD screen will display the following

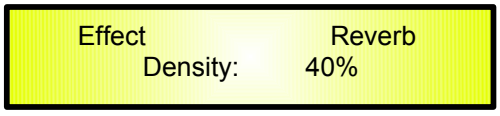
Out Volume – parameter setting the Stereo Delay Output Volume before the Mix with the Reverb Effect, in order to be sent to the Microphone and Music Paths.
The Stereo Delay Volume can be set between 0% (Stereo Delay Muted) up to 100% (Stereo Delay fully "Open") by steps of 1%.
The LCD screen will display the following

Effect Reverb Pages – here we have 9 pages containing the Reverb process editable parameters.
The 9 pages are the following:
Decay – parameter setting the Decay Time of the Reverb, ranging from 0% up to 100% by steps of 1%
The LCD screen will display the following



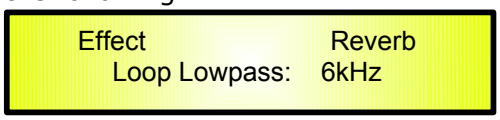
PreDelay Time – parameter setting the Pre-Delay Time of the Reverb, ranging from 0ms up to 200ms by steps of 1ms.
The LCD screen will display the following

Density – parameter setting the Density of the Reverb, ranging from 0% up to 100% by steps of 1%
The LCD screen will display the following

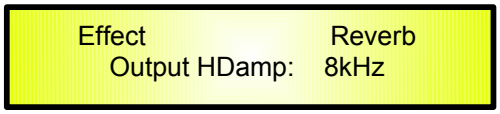


Loop Highpass – parameter setting the High Pass 1st order Filter of the Reverb's Main Loop, ranging from 20Hz up to 20kHz by steps of 1/12 of Oct.
The LCD screen will display the following

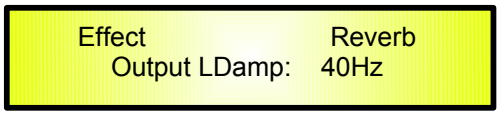
Loop Lowpass – parameter setting the Low Pass 1st order Filter of the Reverb's Main Loop, ranging from 20Hz up to 20kHz by steps of 1/12 of Oct.
The LCD screen will display the following



Output HDamp – parameter setting the High Damp (Low Pass) Output Filter of the Reverb, ranging from 20Hz up to 20kHz by steps of 1/12 of Oct.
The LCD screen will display the following



Output LDamp – parameter setting the Low Damp (High Pass) Output Filter of the Reverb, ranging from 20Hz up to 20kHz by steps of 1/12 of Oct.
The LCD screen will display the following

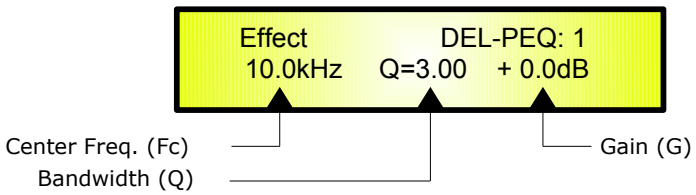


Density PreDelay – parameter setting the Pre-Delay Time of the Reverb's Density, ranging from 0ms up to 200ms by steps of 1ms.
The LCD screen will display the following

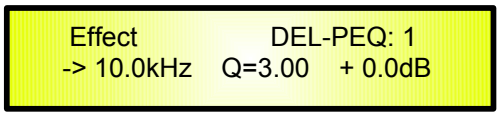
Direct Volume – parameter setting the Direct Signal Volume summed to Reverb Output
The Direct Volume can be set between 0% (Direct Muted) up to 100% (Direct fully "added" to the Reverb Output) by steps of 1%.
The LCD screen will display the following

Out Volume (Reverb)– parameter setting the Reverb Output Volume before the Mix with the Delay Effect, in order to be sent to the Microphone and Music Paths.
The Reverb Volume can be set between 0% (Reverb Muted) up to 100% (Reverb fully "Open") by steps of 1%. The LCD screen will display the following

DEL-PEQ / REV-PEQ [1/2/3//4/5/6] – The KD-1540P is providing 3 Peaking Filters for "coloring" the Delay and the Reverb effects.
For any one of these effects, 3 Peaking filters are available and fully editable
Once entered the pages of the Effects Peaking Filters, the LCD screen will display the following, if i.e. We want to set the Peaking Filter number 1 of the Delay Efx



Pressing once more the "ENTER" button, it is possible to edit the page's parameters and the above window will be appear as follow



Center Freq. (Fc) – this is the Peaking Filter's Center Frequency and the range of the available values is going from 20Hz up to 20kHz by steps of 1/12 of Oct.
The Center Frequency can be accessed from the "Effect DEL-PEQ: 1" page, just pressing the "ENTER" button.

Quality Factor (Q) – this is the Peaking Filter's Q and can range from the "3.0" up to "32.5" by steps of 0.05.
The Q can be accessed coming from the previous selection of the Center Freq., just pressing the"R" button

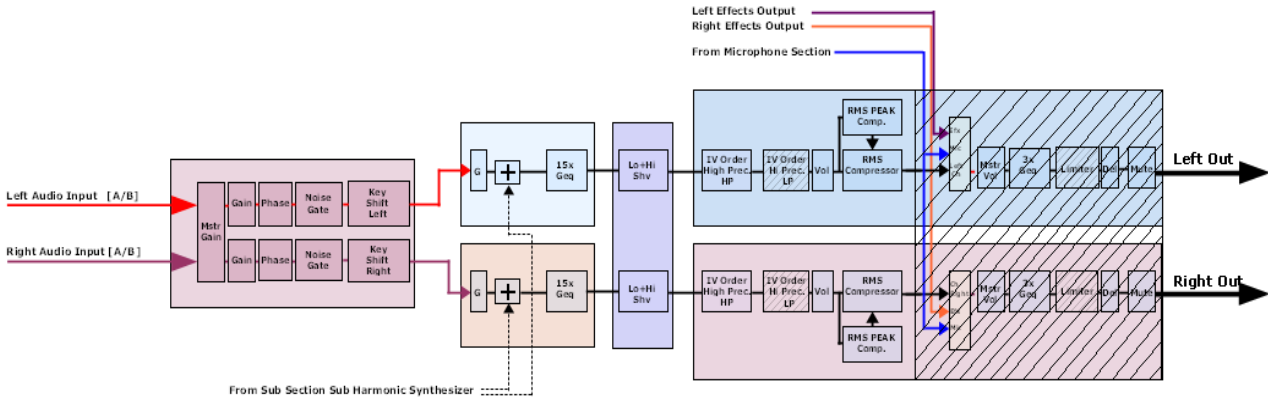
Gain (G) – this is the Peaking Filter's Gain and can range from the -12dB up to +12dB by steps of 0.5dB.
The Peaking filter's Gain can be accessed coming from the previous selection of the Q, just pressing the"R" button

- **Music Para Submenu: Music Signal Processes Section**

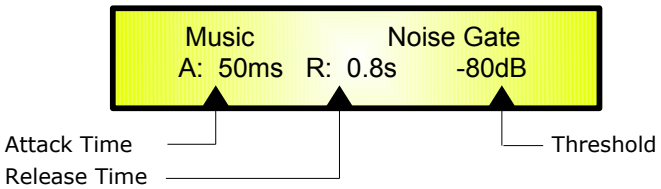
From the "Normal Operation" screen, it is possible to access the "Music Para Submenu" using the "EDIT" button and selecting the "Music Para Submenu" using the L/R buttons to scroll between the several Sub menus.
The Music Para Submenu can also be accessed QUICKLY just pressing the "Music" button in the "EDIT" section of the KD-1540P Front Panel.

Once selected the "Music Para Submenu", using the "ENTER" an "L/R" buttons it is possible to access the several pages of the Submenu, so as to enter them for the parameters' editing, which values can be modified by the "Up/Down" buttons.
Note: in the all pages' options, the all possible selections can be selected as said by the "Up/Down" buttons and the current shown value of the selected options is AUTOMATICALLY loaded during the "Up/Down" use and stored as current value once left the page.
In the following ALL Pages, once selected the desired option and modified it, the modification is automatically accepted as current one during the selection itself and stored in the KD-1540P system status once left the page.

Music Signal Input/Output Path Block Scheme

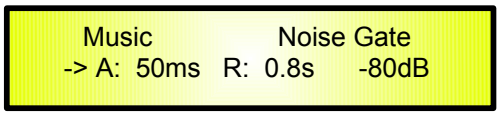


Referring to the previous block scheme, here below the description of the "Music Para Submenu" pages:
Music Noise Gate – this page allows to adjust the parameters of the available Noise Gate on the Music input path.
The LCD screen will display the following



As described already in the editing section command "tree", the parameters within the Submenu page can be accessed pressing the "ENTER" button.
Once one parameter is selected, then at its side will appear a small "arrow".
Once the arrow is aside the parameter, its values can be modified by the "Up/Down" buttons.

If, in example, we selected the Attack time.The above window will be appear as follow



The Attack time of the Noise Gate, then, can be set by the "Up/Down" buttons.
Once set the Attack time, the Release time and Threshold, can be selected using the "L/R" buttons and their values again adjusted by the "Up/Down" buttons.

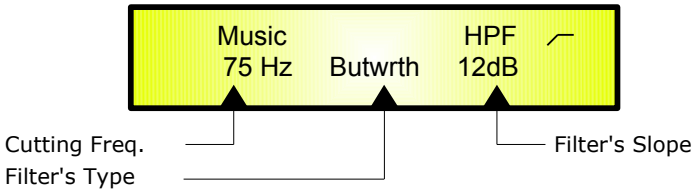
Attack Time [A] – the range of the selectable Noise Gate's Attack Time is going from 1ms to 480ms by steps of 1ms from 1ms to 20ms, 5ms from 20ms to 30ms, 10ms from 30ms to 100ms, 20ms from 100ms to 200ms, then a 240ms, 300ms and 400ms are available before 480ms.
The Noise Gate's Attack Time is representing the time taken by the Noise Gate to "close" the output level after detected the lack of input signal and can be accessed from the "Music Noise Gate" page, just pressing the "ENTER" button.
Release Time [R] – the range of the selectable Compressor's Release Time is going from 10ms to 280ms by steps of 10ms.
The Noise Gate's Release Time is representing the time taken by the Noise Gate to exit from the Output Muted condition after detected an input signal and can be accessed coming from the previous selection of the Attack Time, just pressing the"R" button (from the Release time it is possible to go back to the Attack time, pressing the "L" button).
Threshold – the range of the selectable Noise Gate's Threshold is going from less than -90dB (Noise Gate OFF) up to -65dB by steps of 1 dB and can be accessed coming from the previous selection of the Release Time, just pressing the"R" button.

Music KeyShift – this page allows to set the "Key" of the Music Signal.
The Music signal is processed by a Key shift Algorithm able to transpose the signal by steps of semitones.
Once entered the page, the LCD screen will display the following

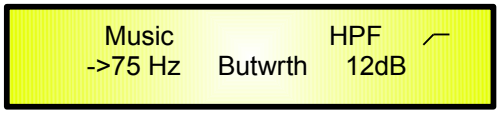
Pressing once more the "ENTER" button, it is possible to edit the page's parameters and the above window will be appear as follow

Semitone – this parameter allows to decide which is the amount of transpose to apply to the Music signal, in terms of semitones difference from the original Key.
The Value of this parameter is ranging from -12 Semitones (b12, one Octave Down) up to +12 Semitones (#12, one Octave up) by steps of 1 Semitone.
The Semitone parameter can be accessed from the "Music KeyShift" page, just pressing the "ENTER" button.

Music HPF – this page allows to adjust the Second order HP filter available on the Audio's input path.
Once entered the page, the LCD screen will display the following

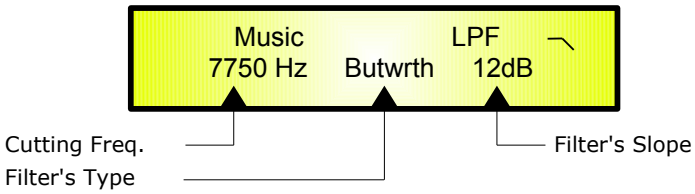


Pressing once more the "ENTER" button, it is possible to edit the page's parameters and the above window will be appear as follow

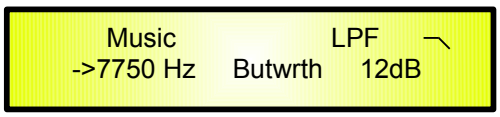


Cutting Freq. – the available values of the High Pass Filter's Low Cut Frequency are ranging from 20Hz up to 20kHz by steps of 1/12 of Oct.
The HP Low Cut Frequency can be accessed from the "Music HPF" page, just pressing the "ENTER" button.
Filter Slope – the High Pass Filter's slope can range from the "No Cut-Off" (filter bypassed) up to a 24dB/Oct (fourth order filter).
The HP Low Cut Frequency can be accessed coming from the previous selection of the Cutting Freq., just pressing the"R" button

Music LPF – this page allows to adjust the Second order LP filter available on the Audio's input path.
Once entered the page, the LCD screen will display the following



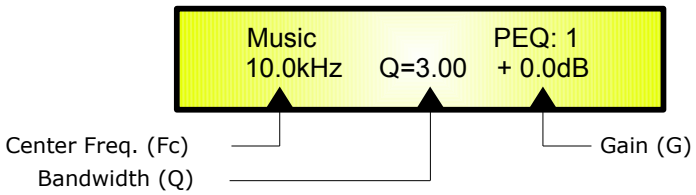
Pressing once more the "ENTER" button, it is possible to edit the page's parameters and the above window will be appear as follow



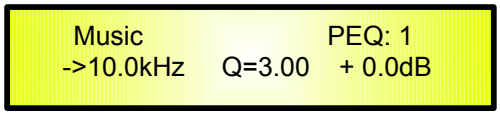
Cutting Freq. – the available values of the Low Pass Filter's High Cut Frequency are ranging from 20Hz up to 20kHz by steps of 1/12 of Oct.
The LP High Cut Frequency can be accessed from the "Music LPF" page, just pressing the "ENTER" button.
Filter Slope – the Low Pass Filter's slope can range from the "No Cut-Off" (filter bypassed) up to a 24dB/Oct (fourth order filter).
The LP High Cut Frequency can be accessed coming from the previous selection of the Cutting Freq., just pressing the"R" button

Music PEQ: 1 *(to)* ***PEQ: 15*** – here we have 15 pages with the same characteristics, allowing to adjust 15 Peaking Filters, available on the Music's input path.

Peaking Filters - Once entered the pages, the LCD screen will display the following, if i.e. We want to set the Peaking Filter as Filter number 1



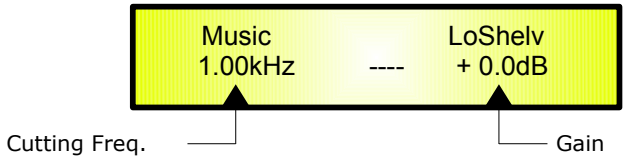
Pressing once more the "ENTER" button, it is possible to edit the page's parameters and the above window will be appear as follow



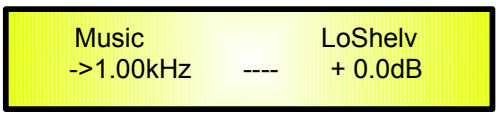
Center Freq. (Fc) – this is the Peaker Filter's Center Frequency and the range of the available values is going from 20Hz up to 20kHz by steps of 1/12 of Oct.
The Center Frequency can be accessed from the "Music PEQ: X" page, just pressing the "ENTER" button.
Quality Factor (Q) – this is the Peaking Filter's Q and can range from the "3.0" up to "32.5" by steps of 0.05.
The Bandwidth can be accessed coming from the previous selection of the Center Freq., just pressing the"R" button
Gain (G) – this is the Peaking Filter's Gain and can range from the -12dB up to +12dB by steps of 0.5dB.
The Peaking filter's Gain can be accessed coming from the previous selection of the Q, just pressing the"R" button

Music LoShelv – here we have the page, allowing to adjust a Low Shelving Filter, available on the Music's input path.

Low Shelving Filter – the following page allows to adjust the Low Shelving Filter, available on the Music's input path.
Once entered the page of the 2nd Order Low Shelving Filter, the LCD screen will display the following



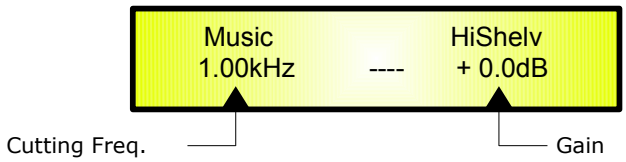
Pressing once more the "ENTER" button, it is possible to edit the page's parameters and the above window will be appear as follow



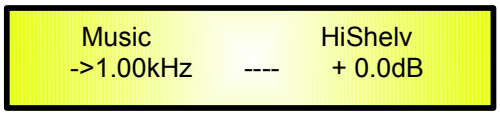
Cutting Freq. – the available parameter of the Low Shelving Filter's Cutting Frequency is ranging from 20Hz up to 20kHz by steps of 1/12 of Oct.
Gain – the Low Shelving Filter's Gain can range from -12dB up to +12dB by steps of 0.5dB.
The Low Shelving Filter's Gain can be accessed coming from the previous selection of the Cutting Freq., just pressing the"R" button

Music HiShelv – here we have the page, allowing to adjust a High Shelving Filter, available on the Music's input path.

High Shelving Filter – the following page allows to adjust the High Shelving Filter, available on the Music's input path.
Once entered the page of the 2nd Order High Shelving Filter, the LCD screen will display the following



Pressing once more the "ENTER" button, it is possible to edit the page's parameters and the above window will be appear as follow



Cutting Freq. – the available parameter of the High Shelving Filter's Cutting Frequency is ranging from 20Hz up to 20kHz by steps of 1/12 of Oct.
Gain – the High Shelving Filter's Gain can range from -12dB up to +12dB by steps of 0.5dB.
The Low Shelving Filter's Gain can be accessed coming from the previous selection of the Cutting Freq., just pressing the"R" button

Music Compressor [1/2] – this page allows to adjust the parameters of the available RMS Compressor on the music output path, before to reach the Main Line Out Ch1/Ch2.
The LCD screen will display the following

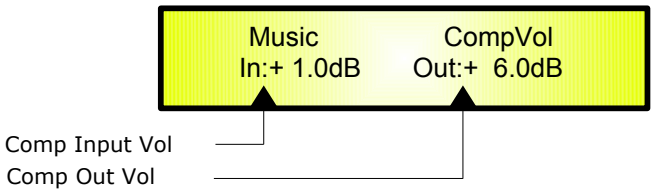
Pressing once more the "ENTER" button, it is possible to edit the page's parameters and the above window will be appear as follow

Attack Time [A] – the range of the selectable Compressor's Attack Time is going from 1ms to 480ms by steps of 1ms from 1ms to 20ms, 5ms from 20ms to 30ms, 10ms from 30ms to 100ms, 20ms from 100ms to 200ms, then a 240ms, 300ms and 400ms are available before 480ms.
The Compressor's Attack Time can be accessed from the "Music Compressor" page, just pressing the "ENTER" button.
Release Time [R] – the range of the selectable Compressor's Release Time is going from 100ms to 2.8S by steps of 100ms.
The Compressor's Release Time can be accessed coming from the previous selection of the Attack Time, just pressing the"R" button (from the Release time it is possible to go back to the Attack time, pressing the "L" button).
Ratio – The range of the selectable Compressor's Ratio is going from 1:1 (no Compression), up to 20:1.
The Compressor's Ratio can be accessed coming from the previous selection of the Release Time, just pressing the"R" button (from the Ratio it is possible to go back to the Release time, pressing the "L" button).

Threshold – the range of the selectable Compressor's Threshold is going from +0dB (Compressor not active) up to -30dB by steps of 1 dB and can be accessed coming from the previous selection of the Ratio, just pressing the"R" button.

Music Compressor [2/2] – this page allows to chose the "Knee" type for the RMS compressor, editable in the following Page.
The Knee can be selected to be Hard (immediate compression after the threshold) or Soft (the compression start smoothly before the selected Threshold).
If selected the Soft Knee, the LCD screen will display the following

Music CompVol – this page allows to adjust the Music's compressor input/output levels.
Once entered the page, the LCD screen will display the following



Pressing once more the "ENTER" button, it is possible to edit the page's parameters and the above window will be appear as follow

In – this is the Input Level parameter and the range of the available values is going from -6dB up to +6dB by steps of 0.5dB.
The Compressor's Input Level can be accessed from the "Music CompVol" page, just pressing the "ENTER" button.
Out – this is the Output Level parameter and the range of the available values is going from -6dB up to +6dB by steps of 0.5dB.
The Compressor's Output Level can be accessed coming from the previous selection of the "In"

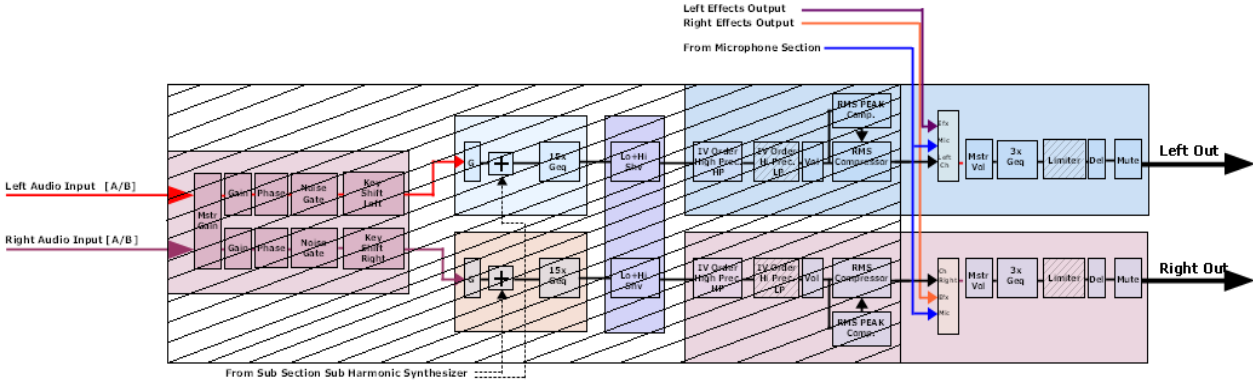
level, just pressing the"R" button.

- **Main Output Para Submenu: Music Main Output Processes Section**

From the "Normal Operation" screen, it is possible to access the "Main Output Para Submenu" using the "EDIT" button and selecting the "Main Output Para Submenu" using the L/R buttons to scroll between the several Sub menus.
The Main Output Para Submenu can also be accessed QUICKLY just pressing the "MAIN" button in the "EDIT" section of the KD-1540P Front Panel.

Once selected the " Main Output Para Submenu", using the "ENTER" an "L/R" buttons it is possible to access the several pages of the Submenu, so as to enter them for the parameters' editing, which values can be modified by the "Up/Down" buttons.
Note: in the all pages' options, the all possible selections can be selected as said by the "Up/Down" buttons and the current shown value of the selected options is AUTOMATICALLY loaded during the "Up/Down" use and stored as current value once left the page.
In the following ALL Pages, once selected the desired option and modified it, the modification is automatically accepted as current one during the selection itself and stored in the KD-1540P system status once left the page.

Main Output Signal Input/Output Path Block Scheme



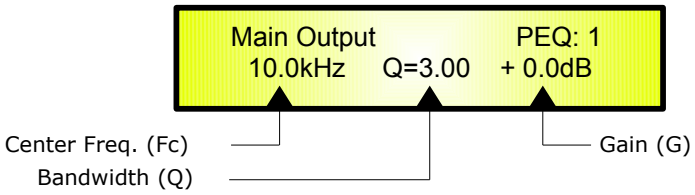
Referring to the previous block scheme, here below the description of the " Main Output Para Submenu" pages:
Main Output SignalFrom – this page allows to set the Level of the Audio Left/Right Processed Signal, of the Microphone Processed Direct Signal (Equalized but without added Effects) and the one of the Microphone Effected Signal (Effects Section Output) to be added to the Music Main Output (see previous block scheme).
Once entered the page, the LCD screen will display the following

Main Output SignalFrom
A: 0% M = 50% Efx = 20%

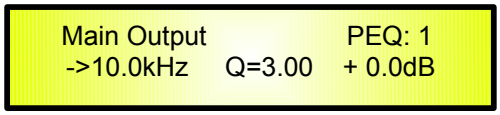
Pressing once more the "ENTER" button, it is possible to edit the page's parameters and the above window will be appear as follow

Main Output SignalFrom
-> A: 0% M = 50% Efx = 20%

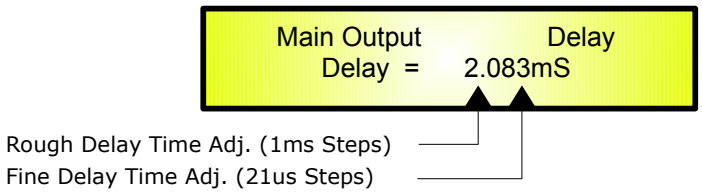
A – Equalized Signal from the Left/Right (respectively) Audio Channels' path Level, to be added to the Main Music Left/Right Outputs, ranging from 0% (Equalized Left/Right Audio Inputs Muted) and 100% (Max Equalized Left/Right Audio Inputs Level).
The Volume parameter can be accessed from the "Music SignalFrom" page, just pressing the "ENTER" button.
M – Equalized Direct Signal from Microphone's path Level, to be added to the Main Music Outputs, ranging from 0% (Direct Equalized Microphone Input Muted) and 100% (Max Direct Equalized Microphone Input Level).
The Volume parameter can be accessed from the "Music SignalFrom" page, just pressing the "ENTER" button.
Efx – Microphone's Equalized AND Effected Signal Level, to be added to the Main Music Outputs, ranging from 0% (Equalized AND Effected Microphone Input Muted) and 100% (Max Equalized AND Effected Microphone Input Level).
The Volume parameter can be accessed from the "Music SignalFrom" page, just pressing the "ENTER" button.
Main Output PEQ: 1 *(to)* ***PEQ: 3*** – here we have 3 pages with the same characteristics, allowing to adjust 3 Peaking Filters, available on the Main Music Outputs path.
Peaking Filters - Once entered the pages, the LCD screen will display the following, if i.e. We want to set the Peaking Filter as Filter number 1



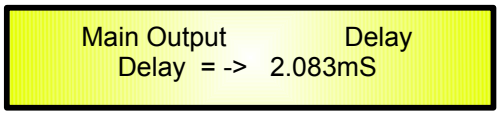
Pressing once more the "ENTER" button, it is possible to edit the page's parameters and the above window will be appear as follow



Center Freq. (Fc) – this is the Peaker Filter's Center Frequency and the range of the available values is going from 20Hz up to 20kHz by steps of 1/12 of Oct.
The Center Frequency can be accessed from the "Microphone PEQ: X" page, just pressing the "ENTER" button.
Quality Factor (Q) – this is the Peaking Filter's Q and can range from the "3.0" up to "32.5" by steps of 0.05.
The Bandwidth can be accessed coming from the previous selection of the Center Freq., just pressing the"R" button
Gain (G) – this is the Peaking Filter's Gain and can range from the -12dB up to +12dB by steps of 0.5dB.
The Peaking filter's Gain can be accessed coming from the previous selection of the Q, just pressing the"R" butto
Main Output Delay – this page allows to set the microphone's output Delay Time, for "signal alignment" purpose.
Once entered the page, the LCD screen will display the following

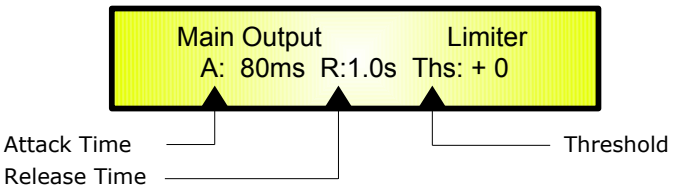


Pressing once more the "ENTER" button, it is possible to edit the page's parameters and the above window will be appear as follow

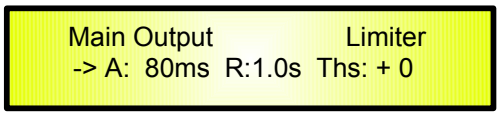


Rough Delay Time Adj. – this parameter allows to set the Microphone Delay Time by 1ms steps from 0ms up to 80ms and can be accessed from the "Music Delay" page, just pressing the "Enter" button.
Fine Delay Time Adj. – this parameter allows to set the Microphone Delay Time by 21us steps from 0ms up to 0.979ms and can be accessed coming from the previous selection of the "Rough Delay Time Adj.", just pressing the"L/R" buttons either.

Main Output Limiter – this page allows to adjust the parameters of the available Peak Limiter on the microphone outputs path, before to reach the Main Music Output.
The LCD screen will display the following



Pressing once more the "ENTER" button, it is possible to edit the page's parameters and the above window will be appear as follow



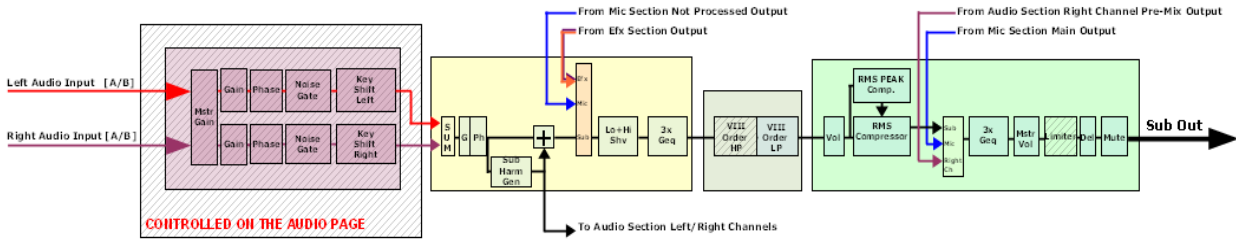
Attack Time [A] – the range of the selectable Limiter's Attack Time is going from 1ms to 480ms by steps of 1ms from 1ms to 20ms, 5ms from 20ms to 30ms, 10ms from 30ms to 100ms, 20ms from 100ms to 200ms, then a 240ms, 300ms and 400ms are available before 480ms.
The Limiter's Attack Time can be accessed from the "Music Limiter" page, just pressing the "ENTER" button.
Release Time [R] – the range of the selectable Limiter's Release Time is going from 100ms to 2.8S by steps of 100ms.
The Limiter's Release Time can be accessed coming from the previous selection of the Attack Time, just pressing the"R" button (from the Release time it is possible to go back to the Attack time, pressing the "L" button).
Threshold – the range of the selectable Limiter's Threshold is going from +0dB (Limiter not active) up to -24dB by steps of 1 dB and can be accessed coming from the previous selection of the Ratio, just pressing the"R" button.

- **Subwoofer Para Submenu:Subwoofer Output Processes Section**

From the "Normal Operation" screen, it is possible to access the "Subwoofer Para Submenu" using the "EDIT" button and selecting the " Subwoofer Para Submenu" using the L/R buttons to scroll between the several Sub menus.
The Subwoofer Para Submenu can also be accessed QUICKLY just pressing the "SUB" button in the "EDIT" section of the KD-1540P Front Panel.

Once selected the "Subwoofer Para Submenu", using the "ENTER" an "L/R" buttons it is possible to access the several pages of the Submenu, so as to enter them for the parameters' editing, which values can be modified by the "Up/Down" buttons.
Note: in the all pages' options, the all possible selections can be selected as said by the "Up/Down" buttons and the current shown value of the selected options is AUTOMATICALLY loaded during the "Up/Down" use and stored as current value once left the page.
In the following ALL Pages, once selected the desired option and modified it, the modification is automatically accepted as current one during the selection itself and stored in the KD-1540P system status once left the page.

Subwoofer Signal Input/Output Path Block Scheme



Subwoofer SignalFrom – this page allows to set the Level of the Audio Left/Right [(L+R)/2] Signal, of the Microphone Processed Direct Signal (Equalized but without added Effects) and the one of the Microphone Effected Signal (Effects Section Output) to be added to the Sub Output (see previous block scheme).
Once entered the page, the LCD screen will display the following

Subwoofer SignalFrom
A: 0% M = 50% Efx = 20%

Pressing once more the "ENTER" button, it is possible to edit the page's parameters and the above window will be appear as follow

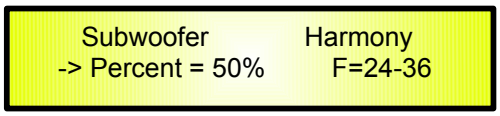
Subwoofer SignalFrom
-> A: 0% M = 50% Efx = 20%

A – Equalized Signal from the Right Audio Channel's path Level, to be added to the Main Sub Output, ranging from 0% (Equalized Right Audio Input Muted) and 100% (Max Equalized Right Audio Input Level).The Volume parameter can be accessed from the "Sub Output SignalFrom" page, just pressing the "ENTER" button.

M – Equalized Direct Signal from Microphone's path Level, to be added to the Main Sub Output, ranging from 0% (Direct Equalized Microphone Input Muted) and 100% (Max Direct Equalized Microphone Input Level).
The Volume parameter can be accessed from the "Sub Output SignalFrom" page, just pressing the "ENTER" button.
Efx – Equalized Effected Signal from microphone, to be added to the Main Sub Output, ranging from 0% (Equalized Effected Input Muted) and 100% (Max Equalized Effected Input Level).
The Volume parameter can be accessed from the "Subwoofer SignalFrom" page, just pressing the "ENTER" button.

Subwoofer Harmony – this page allows to activate on the Sub path a Sub Harmonic Synthesizer, improving the Sub Harmonics of an Audio Signal sent to the Sub Section, synthesizing Sub Harmonics (one octave lower) of the the signal itself.
The genrated Sub Harmonics can be added with the desired percentage to the opriginal signal sent to the Sub Output.Once entered the page, the LCD screen will display the following

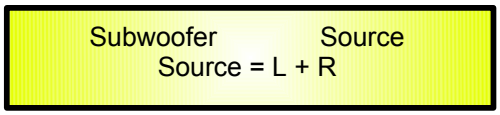
Pressing once more the "ENTER" button, it is possible to edit the page's parameters and the above window will be appear as follow



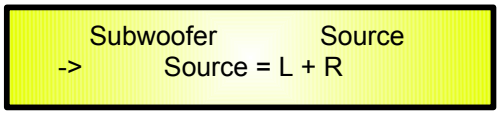
Percent – Synthesized Sub Harmonic Percentage on the Sub Output Signal, ranging from 0% (Sub Harmonics Muted) and 100% (Max Sub Sub Harmonic Addition).
The Volume parameter can be accessed from the "Subwoofer Harmony" page, just pressing the "ENTER" button.
F – the Sub Harmonic Synthesizer is working generating sub Harmonics on the base on the Harmonic content of the original signal.
Particuarly, the amplitude distribution of the generated Sub Harmonics is following the shape of a band pass filter set on the low part of the band.
The peak of this "band pass" filter, is centered on 2 possible frequencies, 60Hz and 90Hz.
This means that when selected the frequency range setting the Sub Harmonics Amplitude Peak on 60Hz (24-36Hz), the Harmonics added to the original sound will bring a "deep" and very low extra body to the original sound.

When selected the frequency range setting the Sub Harmonics Amplitude Peak on 90Hz (36-56Hz), the Harmonics added to the original sound will bring a "lioghter and more booming" extra body to the original sound.
The Selection of the Frequency Range can be accessed coming from the previous selection of the Percentage, just pressing the"R" button.

Subwoofer Source – this page allows to set the source signal for the Sub Section Input.
Particularly, the source can be one of the 2 Music Channels (after the Key Shifting) or the SUM of both of them.Once entered the page, the LCD screen will display the following

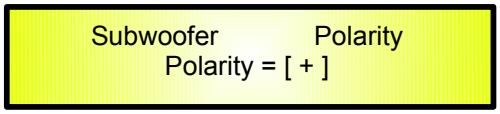


Pressing once more the "ENTER" button, it is possible to edit the page's parameters and the above window will be appear as follow

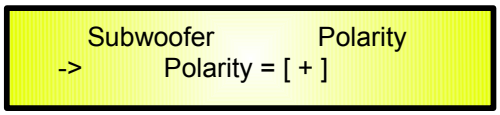


Source – Parameter defining which is the Input signal for the Sub Path.
The Input Signal can be one of the Music Channels (After the Key Shifting) L (Ch1) or R (Ch2), or the SUM of both of them L + R (Ch1+Ch2)
The Source parameter can be accessed from the "Subwoofer Source" page, just pressing the "ENTER" button.

Subwoofer Polarity – this page allows to set the Polarity if the Sub Output Signal.
Once entered the page, the LCD screen will display the following

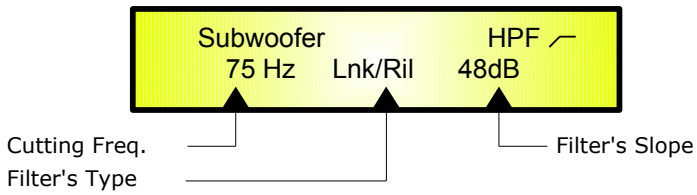


Pressing once more the "ENTER" button, it is possible to edit the page's parameters and the above window will be appear as follow



Polarity – Parameter defining which is the Polarity of the Sub Output Signal.
The Source parameter can be accessed from the "Subwoofer Polarity" page, just pressing the "ENTER" button.

Subwoofer HPF – this page allows to adjust the Second order HP filter available on the sub's input path.
Once entered the page, the LCD screen will display the following

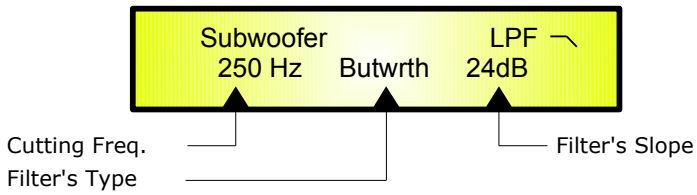


Pressing once more the "ENTER" button, it is possible to edit the page's parameters and the above window will be appear as follow

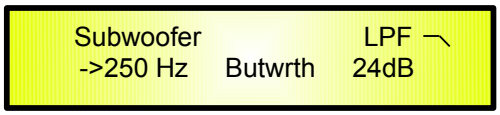
Cutting Freq. – the available values of the High Pass Filter's Low Cut Frequency are ranging from 20Hz up to 20kHz by steps of 1/12 of Oct.
The HP Low Cut Frequency can be accessed from the "Subwoofer HPF" page, just pressing the "ENTER" button.

Filter Slope – the High Pass Filter's slope can range from the "No Cut-Off" (filter bypassed) up to a 48dB/Oct (eighth order filter).
The HP Low Cut Frequency can be accessed coming from the previous selection of the Cutting Freq., just pressing the"R" button

Subwoofer LPF – this page allows to adjust the Second order LP filter available on the sub's input path.
Once entered the page, the LCD screen will display the following



Pressing once more the "ENTER" button, it is possible to edit the page's parameters and the above window will be appear as follow

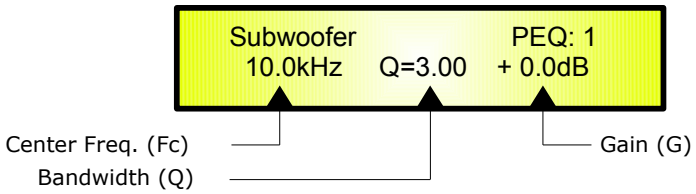


Cutting Freq. – the available values of the Low Pass Filter's Low Cut Frequency are ranging from 20Hz up to 20kHz by steps of 1/12 of Oct.
The HP Low Cut Frequency can be accessed from the "Subwoofer LPF" page, just pressing the "ENTER" button.

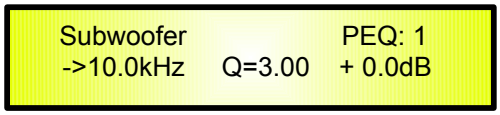
Filter Slope – the Low Pass Filter's slope can range from the "No Cut-Off" (filter bypassed) up to a 48dB/Oct (eight order filter).
The LP High Cut Frequency can be accessed coming from the previous selection of the Cutting Freq., just pressing the"R" button

Subwoofer PEQ: 1 *(to)* ***PEQ: 3*** – here we have 3 pages with the same characteristics, allowing to adjust 3 Peaking Filters, available on the Subwoofer's input path.

Peaking Filters - Once entered the pages, the LCD screen will display the following, if i.e. We want to set the Peaking Filter as Filter number 1



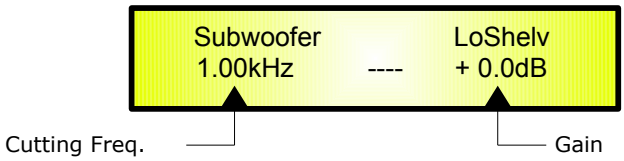
Pressing once more the "ENTER" button, it is possible to edit the page's parameters and the above window will be appear as follow



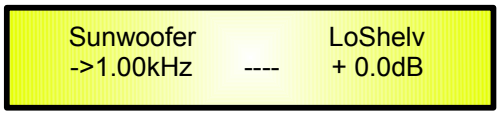
Center Freq. (Fc) – this is the Peaker Filter's Center Frequency and the range of the available values is going from 20Hz up to 20kHz by steps of 1/12 of Oct.
The Center Frequency can be accessed from the "Subwoofer PEQ: X" page, just pressing the "ENTER" button.
Quality Factor (Q) – this is the Peaking Filter's Q and can range from the "3.0" up to "32.5" by steps of 0.05.
The Bandwidth can be accessed coming from the previous selection of the Center Freq., just pressing the"R" button
Gain (G) – this is the Peaking Filter's Gain and can range from the -12dB up to +12dB by steps of 0.5dB.
The Peaking filter's Gain can be accessed coming from the previous selection of the Q, just pressing the"R" button

Subwoofer LoShelv – here we have the page, allowing to adjust a Low Shelving Filter, available on the Subwoofer's input path.

Low Shelving Filter – the following page allows to adjust the Low Shelving Filter, available on the Subwoofer's input path.
Once entered the page of the 2nd Order Low Shelving Filter, the LCD screen will display the following

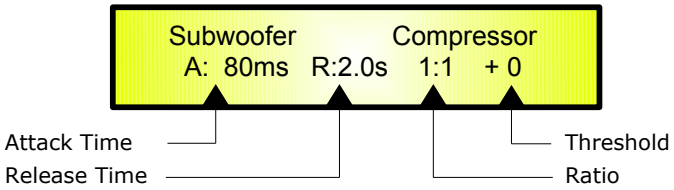


Pressing once more the "ENTER" button, it is possible to edit the page's parameters and the above window will be appear as follow

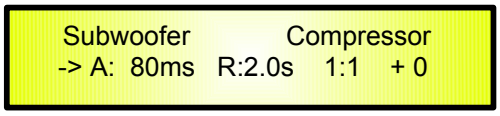


Cutting Freq. – the available parameter of the Low Shelving Filter's Cutting Frequency is ranging from 20Hz up to 20kHz by steps of 1/12 of Oct.
Gain – the Low Shelving Filter's Gain can range from -12dB up to +12dB by steps of 0.5dB.
The Low Shelving Filter's Gain can be accessed coming from the previous selection of the Cutting Freq., just pressing the"R" button

Subwoofer Compressor [1/2] – this page allows to adjust the parameters of the available RMS Compressor on the Sub output path, before to reach the Main Sub Out.
The LCD screen will display the following



Pressing once more the "ENTER" button, it is possible to edit the page's parameters and the above window will be appear as follow

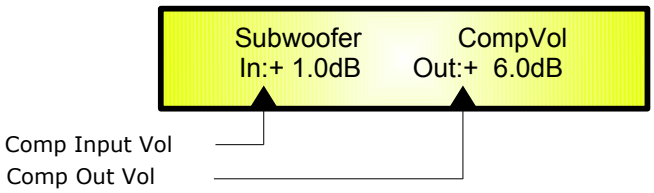


Attack Time [A] – the range of the selectable Compressor's Attack Time is going from 1ms to 480ms by steps of 1ms from 1ms to 20ms, 5ms from 20ms to 30ms, 10ms from 30ms to 100ms, 20ms from 100ms to 200ms, then a 240ms, 300ms and 400ms are available before 480ms.
The Compressor's Attack Time can be accessed from the "Subwoofer Compressor" page, just pressing the "ENTER" button.

Release Time [R] – the range of the selectable Compressor's Release Time is going from 100ms to 2.8S by steps of 100ms.
The Compressor's Release Time can be accessed coming from the previous selection of the Attack Time, just pressing the"R" button (from the Release time it is possible to go back to the Attack time, pressing the "L" button).
Ratio – The range of the selectable Compressor's Ratio is going from 1:1 (no Compression), up to 20:1.
The Compressor's Ratio can be accessed coming from the previous selection of the Release Time, just pressing the"R" button (from the Ratio it is possible to go back to the Release time, pressing the "L" button).
Threshold – the range of the selectable Compressor's Threshold is going from +0dB (Compressor not active) up to -30dB by steps of 1 dB and can be accessed coming from the previous selection of the Ratio, just pressing the"R" button.

Subwoofer Compressor [2/2] – this page allows to chose the "Knee" type for the RMS compressor, editable in the following Page.
The Knee can be selected to be Hard (immediate compression after the threshold) or Soft (the compression start smoothly before the selected Threshold).
If selected the Soft Knee, the LCD screen will display the following

Subwoofer CompVol – this page allows to adjust the Subwoofer's compressor input/output levels.
Once entered the page, the LCD screen will display the following



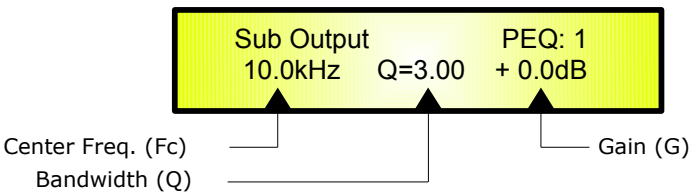
Pressing once more the "ENTER" button, it is possible to edit the page's parameters and the above window will be appear as follow

In – this is the Input Level parameter and the range of the available values is going from -6dB up to +6dB by steps of 0.5dB.
The Compressor's Input Level can be accessed from the "Subwoofer CompVol" page, just pressing the "ENTER" button.

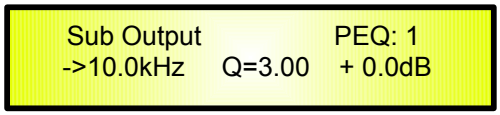
Out – this is the Output Level parameter and the range of the available values is going from -6dB up to +6dB by steps of 0.5dB.
The Compressor's Output Level can be accessed coming from the previous selection of the "In" level, just pressing the"R" button.

Sub Output PEQ: 1 *(to)* ***PEQ: 3*** – here we have 3 pages with the same characteristics, allowing to adjust 3 Peaking Filters, available on the Main Sub Output path.

Peaking Filters - Once entered the pages, the LCD screen will display the following, if i.e. We want to set the Peaking Filter as Filter number 1

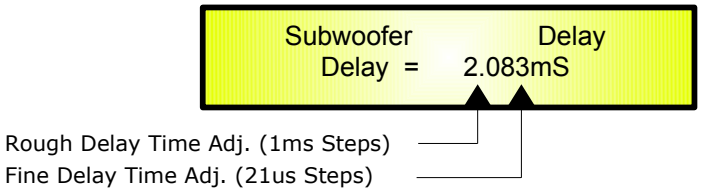


Pressing once more the "ENTER" button, it is possible to edit the page's parameters and the above window will be appear as follow

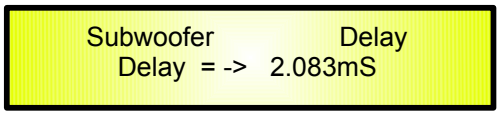


Center Freq. (Fc) – this is the Peaker Filter's Center Frequency and the range of the available values is going from 20Hz up to 20kHz by steps of 1/12 of Oct.
The Center Frequency can be accessed from the "Sub Output PEQ: X" page, just pressing the "ENTER" button.
Quality Factor (Q) – this is the Peaking Filter's Q and can range from the "3.0" up to "32.5" by steps of 0.05.
The Q can be accessed coming from the previous selection of the Center Freq., just pressing the"R" button
Gain (G) – this is the Peaking Filter's Gain and can range from the -12dB up to +12dB by steps of 0.5dB.
The Peaking filter's Gain can be accessed coming from the previous selection of the Q, just pressing the"R" button

Subwoofer Delay – this page allows to set the sub's output Delay Time, for "signal alignment" purpose.
Once entered the page, the LCD screen will display the following

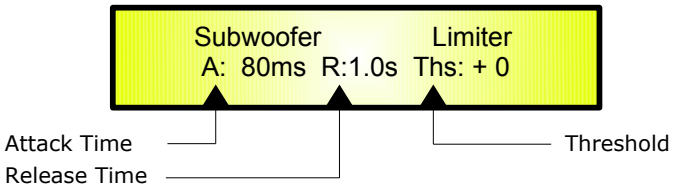


Pressing once more the "ENTER" button, it is possible to edit the page's parameters and the above window will be appear as follow



Rough Delay Time Adj. – this parameter allows to set the Subwoofer Delay Time by 1ms steps from 0ms up to 80ms and can be accessed from the "Subwoofer Delay" page, just pressing the "ENTER" button.
Fine Delay Time Adj. – this parameter allows to set the Subwoofer Delay Time by 21us steps from 0ms up to 0.979ms and can be accessed coming from the previous selection of the "Rough Delay Time Adj.", just pressing the"R" button.

Subwoofer Limiter – this page allows to adjust the parameters of the available Peak Limiter on the Audio outputs path, before to reach the Main Audio Output.
The LCD screen will display the following



Pressing once more the "ENTER" button, it is possible to edit the page's parameters and the above window will be appear as follow

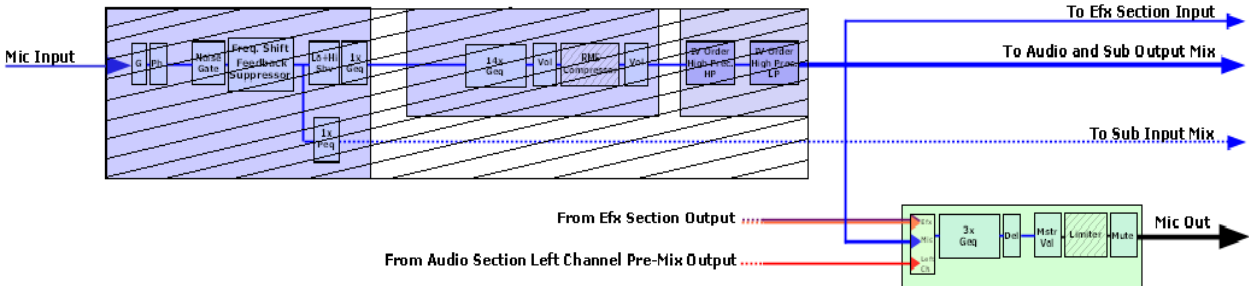
Attack Time [A] – the range of the selectable Limiter's Attack Time is going from 1ms to 480ms by steps of 1ms from 1ms to 20ms, 5ms from 20ms to 30ms, 10ms from 30ms to 100ms, 20ms from 100ms to 200ms, then a 240ms, 300ms and 400ms are available before 480ms.
The Limiter's Attack Time can be accessed from the "Subwoofer Limiter" page, just pressing the "ENTER" button.
Release Time [R] – the range of the selectable Limiter's Release Time is going from 100ms to 2.8S by steps of 100ms.
The Limiter's Release Time can be accessed coming from the previous selection of the Attack Time, just pressing the"R" button (from the Release time it is possible to go back to the Attack time, pressing the "L" button).
Threshold – the range of the selectable Limiter's Threshold is going from +0dB (Limiter not active) up to -24dB by steps of 1 dB and can be accessed coming from the previous selection of the Ratio, just pressing the"R" button.

- **Center Para Submenu: Center (Microphone) Output Processes Section**

From the "Normal Operation" screen, it is possible to access the "Center Para Submenu" using the "EDIT" button and selecting the " Center Para Submenu" using the L/R buttons to scroll between the several Sub menus.
The Center Para Submenu can also be accessed QUICKLY just pressing the "CENTER" button in the "EDIT" section of the KD-1540P Front Panel.

Once selected the "Center Para Submenu", using the "ENTER" an "L/R" buttons it is possible to access the several pages of the Submenu, so as to enter them for the parameters' editing, which values can be modified by the "Up/Down" buttons.
Note: in the all pages' options, the all possible selections can be selected as said by the "Up/Down" buttons and the current shown value of the selected options is AUTOMATICALLY loaded during the "Up/Down" use and stored as current value once left the page.
In the following ALL Pages, once selected the desired option and modified it, the modification is automatically accepted as current one during the selection itself and stored in the KD-1540P system status once left the page.

Center Signal Input/Output Path Block Scheme


Mic Input
To Efx Section Input
To Audio and Sub Output Mix
To Sub Input Mix
From Efx Section Output
From Audio Section Left Channel Pre-Mix Output
Mic Out

Referring to the previous block scheme, here below the description of the "Center Para Submenu" pages:

Mic Center SignalFrom – this page allows to set the Level of the Audio Left Processed Signal, of the Microphone Processed Direct Signal (Equalized but without added Effects) and the one of the Microphone Effected Signal (Effects Section Output) to be added to the Mic Center Output (see previous block scheme).
Once entered the page, the LCD screen will display the following

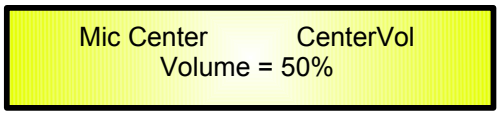
Mic Center SignalFrom
A: 0% M = 50% Efx = 20%

Pressing once more the "ENTER" button, it is possible to edit the page's parameters and the above window will be appear as follow

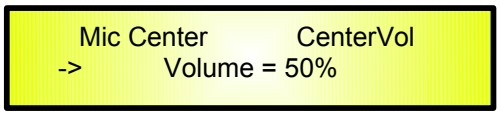
Mic Center SignalFrom
-> A: 0% M = 50% Efx = 20%

A – Equalized Signal from the Left/Right Audio Channel's path Level, to be added to the Main Mic Center Output, ranging from 0% (Equalized Left Audio Input Muted) and 100% (Max Equalized Left Audio Input Level).
The Volume parameter can be accessed from the "Mic Center SignalFrom" page, just pressing the "ENTER" button.
M – Equalized Direct Signal from Microphone's path Level, to be added to the Main Mic Center Output, ranging from 0% (Direct Equalized Microphone Input Muted) and 100% (Max Direct Equalized Microphone Input Level).
The Volume parameter can be accessed from the "Mic Center SignalFrom" page, just pressing the "ENTER" button.
Efx – Microphone's Equalized AND Effected Signal Level, to be added to the Main Mic Center Output, ranging from 0% (Equalized AND Effected Microphone Input Muted) and 100% (Max Equalized AND Effected Microphone Input Level).
The Volume parameter can be accessed from the "Mic Center SignalFrom" page, just pressing the "ENTER" button.

Mic Center CenterVol – this page allows to set the Output Volume of the Mic Center Output (see previous block scheme).
Once entered the page, the LCD screen will display the following



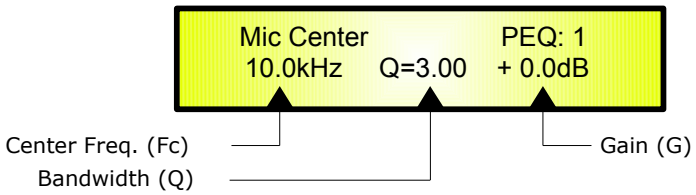
Pressing once more the "ENTER" button, it is possible to edit the page's parameters and the above window will be appear as follow



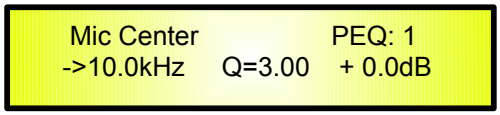
Volume – Output Level of the Main Mic Center Output, ranging from 0% (Output Muted) and 100% (Max Output Level).
The Volume parameter can be accessed from the "Mic Center CompVol" page, just pressing the "ENTER" button.

Mic Center PEQ: 1 *(to)* ***PEQ: 3*** – here we have 3 pages with the same characteristics, allowing to adjust 3 Peaking Filters, available on the Main Mic Center Output path.

Peaking Filters - Once entered the pages, the LCD screen will display the following, if i.e. We want to set the Peaking Filter as Filter number 1

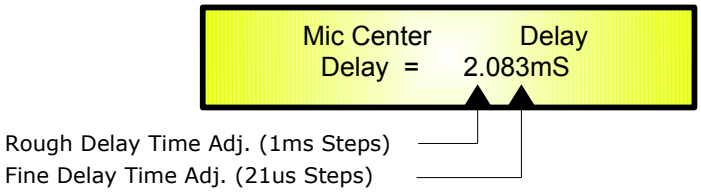


Pressing once more the "ENTER" button, it is possible to edit the page's parameters and the above window will be appear as follow

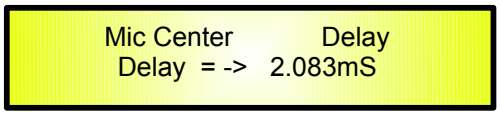


Center Freq. (Fc) – this is the Peaker Filter's Center Frequency and the range of the available values is going from 20Hz up to 20kHz by steps of 1/12 of Oct.
The Center Frequency can be accessed from the "Microphone PEQ: X" page, just pressing the "ENTER" button.
Quality Factor (Q) – this is the Peaking Filter's Q and can range from the "3.0" up to "32.5" by steps of 0.05.
The Q can be accessed coming from the previous selection of the Center Freq., just pressing the"R" button
Gain (G) – this is the Peaking Filter's Gain and can range from the -12dB up to +12dB by steps of 0.5dB.
The Peaking filter's Gain can be accessed coming from the previous selection of the Q, just pressing the"R" button

Mic Center Delay – this page allows to set the microphone's output Delay Time, for "signal alignment" purpose.
Once entered the page, the LCD screen will display the following

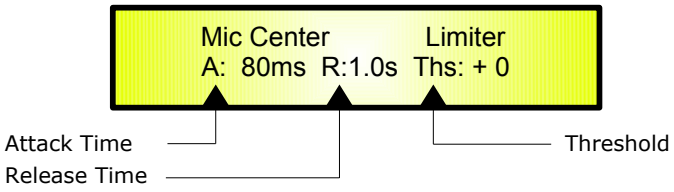


Pressing once more the "ENTER" button, it is possible to edit the page's parameters and the above window will be appear as follow



Rough Delay Time Adj. – this parameter allows to set the Microphone Delay Time by 1ms steps from 0ms up to 80ms and can be accessed from the "Mic Center Delay" page, just pressing the "Enter" button.
Fine Delay Time Adj. – this parameter allows to set the Microphone Delay Time by 21us steps from 0ms up to 0.979ms and can be accessed coming from the previous selection of the "Rough Delay Time Adj.", just pressing the"L/R" buttons either.

Mic Center Limiter – this page allows to adjust the parameters of the available Peak Limiter on the microphone output path, before to reach the Main Mic Center Output.
The LCD screen will display the following



Pressing once more the "ENTER" button, it is possible to edit the page's parameters and the above window will be appear as follow

Attack Time [A] – the range of the selectable Limiter's Attack Time is going from 1ms to 480ms by steps of 1ms from 1ms to 20ms, 5ms from 20ms to 30ms, 10ms from 30ms to 100ms, 20ms from 100ms to 200ms, then a 240ms, 300ms and 400ms are available before 480ms.
The Limiter's Attack Time can be accessed from the "Mic Center Limiter" page, just pressing the "ENTER" button.
Release Time [R] – the range of the selectable Limiter's Release Time is going from 100ms to 2.8S by steps of 100ms.
The Limiter's Release Time can be accessed coming from the previous selection of the Attack Time, just pressing the"R" button (from the Release time it is possible to go back to the Attack time, pressing the "L" button).
Threshold – the range of the selectable Limiter's Threshold is going from +0dB (Limiter not active) up to -24dB by steps of 1 dB and can be accessed coming from the previous selection of the Ratio, just pressing the"R" button.

- **System Submenu: Start Up Default Volumes Level Section**

From the "Normal Operation" screen, it is possible to access the "System Submenu" using the "EDIT" button and selecting the "System Submenu" using the L/R buttons to scroll between the several Sub menus.

Once selected the "System Submenu", using the "ENTER" an "L/R" buttons it is possible to access the several pages of the Submenu, so as to enter them for the parameters' editing, which values can be modified by the "Up/Down" buttons.
Note 1: in the all pages' options, the all possible selections can be selected as said by the "Up/Down" buttons and the current shown value of the selected options is AUTOMATICALLY loaded during the "Up/Down" use and stored as current value once left the page.
In the following ALL Pages, once selected the desired option and modified it, the modification is automatically accepted as current one during the selection itself and stored in the KD-1540P system status once left the page.
Note 2: The System Submenu's pages no need to be entered by the "ENTER" button to be edited, containing those pages just one parameter to be edited.
Once selected the desired page for editing using the L/R buttons, then it is enough to use the Up/Down buttons to set the parameter's value.

Here below the description of the "System Submenu" pages:

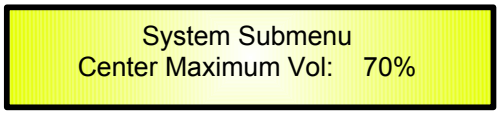
Music StartUp Volume – parameter setting the Music Output Volume at the Unit Start Up, which will be automatically Set by the unit once powered ON.
The Music StartUp Vol can be set between 0% (Music StartUp Vol Muted) up to 100% (Music StartUp Vol fully "Open") by steps of 1%.
The LCD screen will display the following

Sub StartUp Volume – parameter setting the Sub Output Volume at the Unit Start Up, which will be automatically Set by the unit once powered ON.
The Sub StartUp Vol can be set between 0% (Sub StartUp Vol Muted) up to 100% (Sub StartUp Vol fully "Open") by steps of 1%.
The LCD screen will display the following

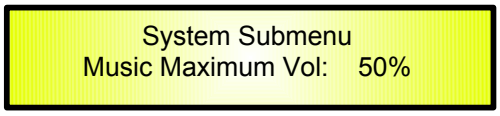
Mic StartUp Volume – parameter setting the Mic Output Volume at the Unit Start Up, which will be automatically Set by the unit once powered ON.
The Mic StartUp Vol can be set between 0% (Mic StartUp Vol Muted) up to 100% (Mic StartUp Vol fully "Open") by steps of 1%.
The LCD screen will display the following

Effect StartUp Volume – parameter setting the Effect Output Volume at the Unit Start Up, which will be automatically Set by the unit once powered ON.
The Effect StartUp Vol can be set between 0% (Effect StartUp Vol Muted) up to 100% (Effect StartUp Vol fully "Open") by steps of 1%.
The LCD screen will display the following

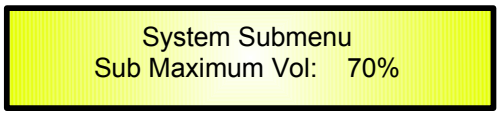
Center StartUp Volume – parameter setting the Center Output Volume at the Unit Start Up, which will be automatically Set by the unit once powered ON.
The Center StartUp Vol can be set between 0% (Center StartUp Vol Muted) up to 100% (Center StartUp Vol fully "Open") by steps of 1%.
The LCD screen will display the following



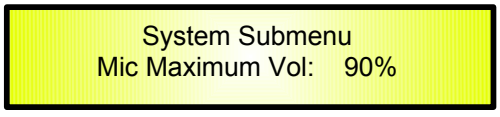
Music Maximum Volume – parameter setting the Maximum Music Output Volume, which will be automatically forbidden to exceed by the unit once attempted by the user editing action.
The Music Maximum Vol can be set between 0% (Music Maximum Vol Muted) up to 100% (Music Maximum Vol fully "Open") by steps of 1%.
The LCD screen will display the following



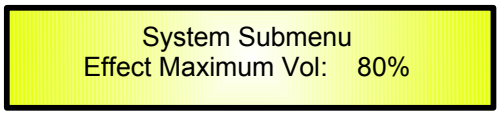
Sub Maximum Volume – parameter setting the Maximum Sub Output Volume, which will be automatically forbidden to exceed by the unit once attempted by the user editing action.
The Sub Maximum Vol can be set between 0% (Sub Maximum Vol Muted) up to 100% (Sub Maximum Vol fully "Open") by steps of 1%.
The LCD screen will display the following



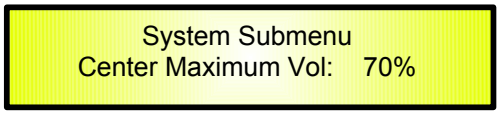
Mic Maximum Volume – parameter setting the Maximum Mic Output Volume, which will be automatically forbidden to exceed by the unit once attempted by the user editing action.
The Mic Maximum Vol can be set between 0% (Mic Maximum Vol Muted) up to 100% (Mic Maximum Vol fully "Open") by steps of 1%.
The LCD screen will display the following



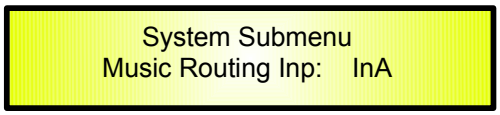
Effect Maximum Volume – parameter setting the Maximum Effects Output Volume, which will be automatically forbidden to exceed by the unit once attempted by the user editing action.
The Effect Maximum Vol can be set between 0% (Effect Maximum Vol Muted) up to 100% (Effect Maximum Vol fully "Open") by steps of 1%.
The LCD screen will display the following



Center Maximum Volume – parameter setting the Maximum Center Output Volume, which will be automatically forbidden to exceed by the unit once attempted by the user editing action.
The Center Maximum Vol can be set between 0% (Center Maximum Vol Muted) up to 100% (Center Maximum Vol fully "Open") by steps of 1%.
The LCD screen will display the following



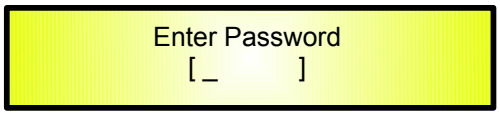
Music Routing Inp – the KD-1540P is a Unit equipped by a pair of Stereo Line inputs called Left/Right Input A and Left/Right Input B.
Furthermore, the KD-1540P is also equipped with a Digital S/PDIF Input, so called DIG.
The "Music Routing Input" parameter allows to select the Music Input to be used as Source for the Music Path.
The Music Routing Input parameter can be **InA**, there where the selected Left/Right inputs are coming from the Physical Input A, or **InB,** there where the selected Left/Right inputs are coming from the Physical Input A or, finally, **DIG**, there where the selected Left/Right inputs are coming from the Physical S/PDIF Input.
The LCD screen will display the following



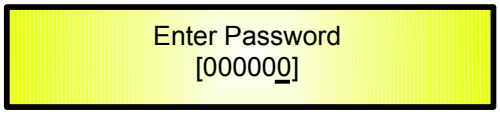
- **Security Submenu: Password Management**

The KD-1540P, has the possibility to set a Password allowing the user to "lock" the unit in order to not let it use the editing functions once set the all presets....unless knowing the Password.
The Password is a 6 character word, which can be chosen by the user and stored in the unit just accessing the Security Submenu.
From the "Normal Operation" screen, it is possible to access the "Security Submenu" using the "EDIT" button and selecting the "Security Submenu" using the L/R buttons to scroll between the several Sub menus.
Once selected the "Security Submenu"

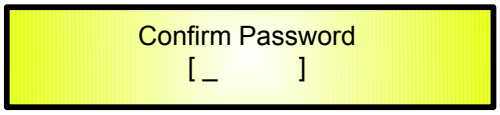
From the "Unit Lock" Menu, pressing once more the "ENTER" button, it is possible finally to access the "Enter Password" Page.



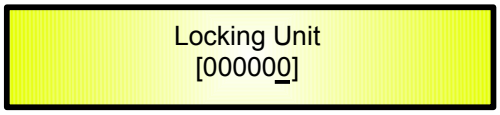
Once entered the "Enter Password" page, a field for writing the 6 characters password will appear and inside it a "blinking down score" will indicate the place where the next character will be placed.
The character can be selected using the Up/Down buttons.
Once placed the character, to move to the next one it is necessary to use the L/R buttons.
The "blinking down score" will move on the place that will "guest" the next character.
In the above way the password can be set.
In example, if the Password is ALL ZEROS, then the screen, after written it, will be the following



Once selected the Password, need to press again the "ENTER" button.
The KD-1540P0 will ask again to confirm the previously set password



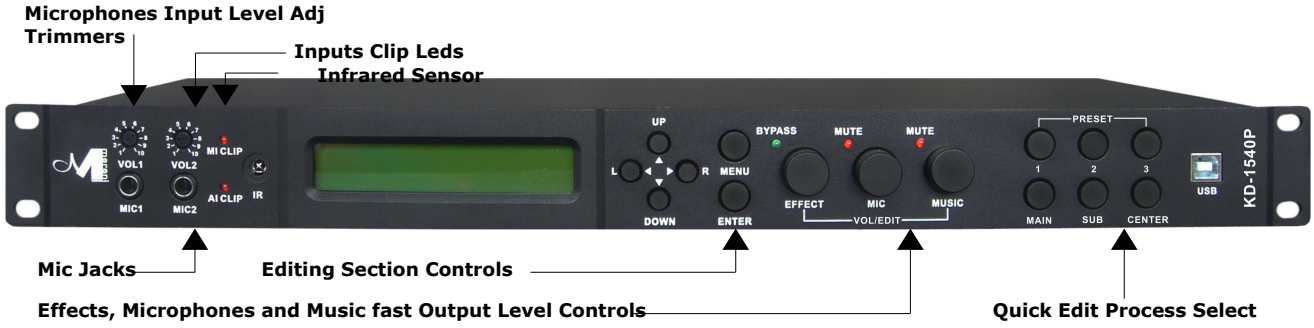
If the re-entered password is the same as the one just set previously, then the Unit will display the following screen



Once the Unit is locked, a "lock" symbol will appear on the "Normal Operation" Screen, indicating that the unit is locked.
To Un-lock the unit, it is enough to follow the same procedures used for locking it...
Once Un-locked the unit, from the "Normal Operation" screen the "lock" symbol will be removed.

- **Other Front Panel Controls**

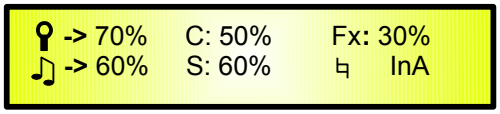
Again referring to the below Front Panel's picture, other controls for the quick access to the KD-1540P functions are available.



Effects, Microphones and Music fast Output Level Controls – these are 3 relative encoders which allow to access directly the Output Level of the related Effect, Mic and Music signals.
From the default "Normal Operation" screen, it is enough to use the related encoder so to adjust the Mic/Center, Music/Sub and Effect Sections' Output Signals Level
Particularly, starting from the "Normal Operation" screen as the following

Accessing the Relative encoders, the Level control can operated as follow

Effect Encoder – Rotating it clockwise or counter-clockwise, it is possible to quickly increase or decrease, respectively, the **Effect Output Signal Level**
Once rotated the encoder, the "Normal Operation' screen will display the percentage of Signal Level currently set for the Effect Output Signal

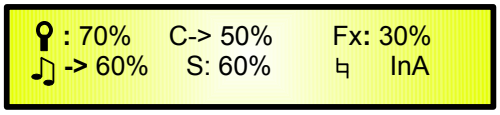


Once selected the desired Level, this will be automatically stored by the unit.
The Effect Encoder has also the "Push Button" function: maintained the Effect Encoder pushed for at least 2 seconds, it is possible to activate/deactivate the Effects.
When the effects are not active, the green "Bypass" led on top of the Effect Encoder will turn ON.

Mic Encoder – Rotating it clockwise or counter-clockwise, it is possible to quickly increase or decrease, respectively, the **Mic Output Signal Level**
Once rotated the encoder, the "Normal Operation' screen will display the percentage of Signal Level currently set for the Mic Output Signal

Once selected the desired Level, this will be automatically stored by the unit.
The Mic Encoder has also the "Push Button" function:

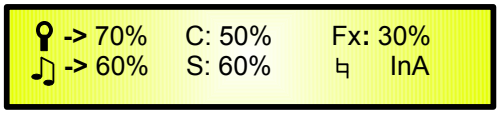
1. Quickly pushing the Mic Encoder button, it is possible to select the Center output as destination of the Level Adjustment Control.
   In this case, the arrow located aside the 'Microphone' Icon when the encoder is acting on the Microphone channel, will move aside the "C" of Center channel



   Now with the Mic Encoder it is possible to adjust the Center channel level.
   To go back to the Mic channel adjustment, it is enough to push quickly the Mic Encoder again

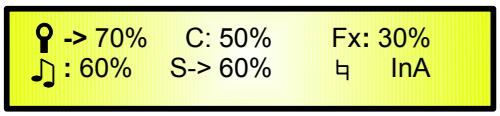
2. maintained the Mic Encoder pushed for at least 2 seconds, it is possible to Mute/Unmute the Microphone input, so Muting the Microphone path and avoiding the signal coming from the microphone to appear on any of the outputs.
   When the Microphone path is muted, the red "Mute" led on top of the Mic Encoder will turn "ON"

Music Encoder – Rotating it clockwise or counter-clockwise, it is possible to quickly increase or decrease, respectively, the **Music Output Signal Level**
Once rotated the encoder, the "Normal Operation' screen will display the percentage of Signal Level currently set for the Music Output Signal



Once selected the desired Level, this will be automatically stored by the unit.
The Music Encoder has also the "Push Button" function:

3. Quickly pushing the Music Encoder button, it is possible to select the Sub output as destination of the Level Adjustment Control.
   In this case, the arrow located aside the 'Notes' Icon when the encoder is acting on the Music channel, will move aside the "S" of Sub channel

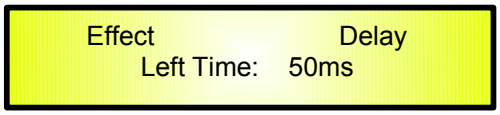


   Now with the Music Encoder it is possible to adjust the Sub channel level.
   To go back to the Music channel adjustment, it is enough to push quickly the Music Encoder again

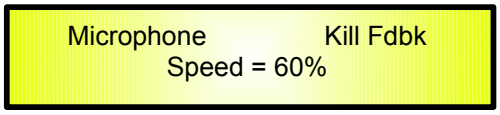
4. maintained the Music Encoder pushed for at least 2 seconds, it is possible to Mute/Unmute the Music input, so Muting the Music path and avoiding the signal coming from the Audio Inputs to appear on any of the outputs.
   When the Music path is muted, the red "Mute" led on top of the Music Encoder will turn "ON"

EDIT Selection – these are 3 buttons which allow to quickly access the Editable processes of the several Submenus related to the main Sections of the KD-1540P:

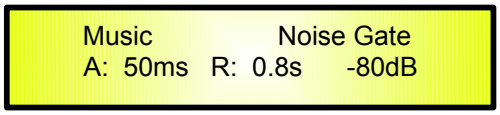
EFFECT: this button, when pressed, allow the quick access to the editable parameters of the Effects Section.
Once pressed the EFFECT button of the EDIT Section, the first page of the "Effect Para Submenu" will be displaied on the LCD:



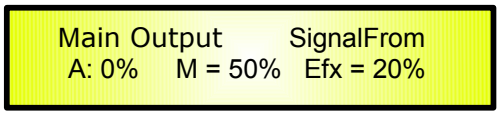
MIC: this button, when pressed, allow the quick access to the editable parameters of the Microphone Input Path Section
Once pressed the MIC button of the EDIT Section, the first page of the "Mic Para Submenu" will be displaied on the LCD:



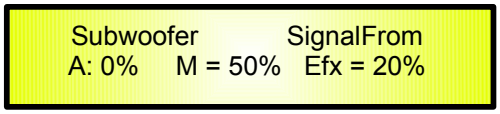
MUSIC: this button, when pressed, allow the quick access to the editable parameters of the Audio/Music Input Path Section
Once pressed the MUSIC button of the EDIT Section, the first page of the "Music Para Submenu" will be displaied on the LCD:



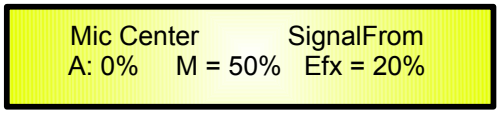
MAIN: this button, when pressed, allow the quick access to the editable parameters of the Audio/Music Output Path Section
Once pressed the MAIN button of the EDIT Section, the first page of the "Main Out Para Submenu" will be displaied on the LCD:



SUB: this button, when pressed, allow the quick access to the editable parameters of the Audio/Sub Section
Once pressed the SUB button of the EDIT Section, the first page of the "Subwoofer Para Submenu" will be displaied on the LCD:



CENTER: this button, when pressed, allow the quick access to the editable parameters of the Microphone Output Path Section
Once pressed the CENTER button of the EDIT Section, the first page of the "Center Para Submenu" will be displaied on the LCD:



Mic Jacks – these are 3 "Jack Style" un-balanced mono inputs for 3 microphones quick plug-in.

Microphones Input Level Adj Trimmers – these are 3 "trimmers", accessible through (plastic) screwdriver, allowing to adjust the microphones input signal levels.

Infrared Sensor – Infrared Sensor used for collecting the command coming from the Infrared external remote controller.

Input Clip Leds – Leds indicating, when flashing, the occurring clip on the related input.
Particularly:

1. **MI Clip** Led: is the led indicating an occurring CLIP on the Microphone Input
   In a such case, need to reduce the microphone's input level through, in example, the Microphones Input Level Adj Trimmers.
2. **AI Clip** Led: is the led indicating an occurring CLIP on the Audio Inputs
   In a such case, need to reduce the Audio's input level through, in example, the Input Range switches on the KD-1540P back panel.

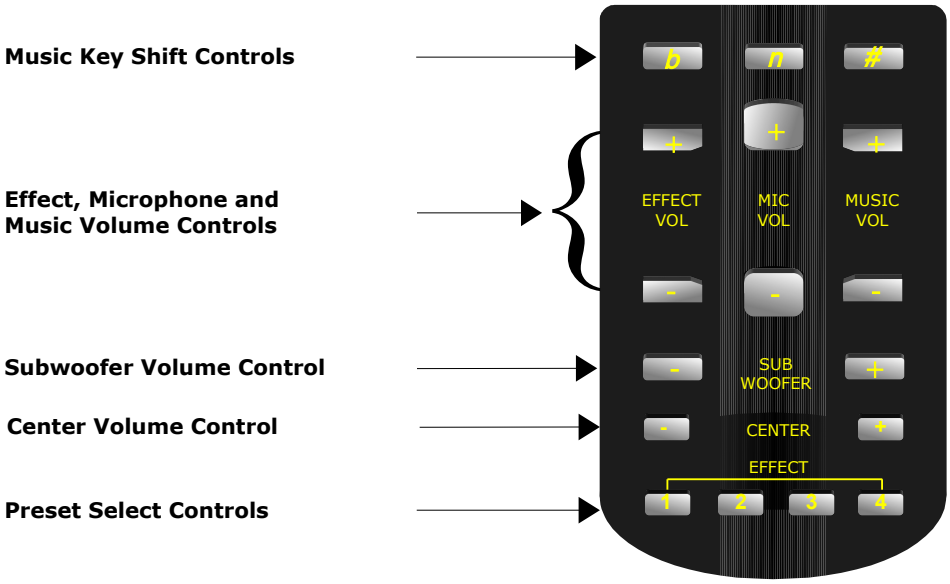
Process Overflows – Leds indicating, when flashing, the occurring overflow on the related input.
Particularly:

1. **MOV Clip**: is the led indicating an occurring OVERFLOW on the Microphone path's processes (Filtering, Effects, etc.); in a such case, need to reduce the Input Level at the microphone path, in example reducing the digital input gain.
2. **AOV Clip**:is the led indicating an occurring OVERFLOW on the Audio path's processes (Filtering, etc.); in a such case, need to reduce the Input Level at the Audio path, in example reducing the digital input gain.
3. **SOV Clip**:is the led indicating an occurring OVERFLOW on the Sub path's processes (Filtering, etc.); in a such case, need to reduce the Input Level at the Audio/Sub path, in example reducing the digital input gain.

- **Infrared Remote Control**

The KD-1540P Digital Speaker Processor can be controlled remotely by an Infrared Remote Control, allowing to control some basic function of the unit.

Referring to the remote controller here below



Music Key Shift Controls: the 3 buttons of this section are replicating the functions of the three buttons of the front panel, used for the Music Key Transpose, described in the "***Quick Music Key Selection***" paragraph:

"***b***" **Button** – Pushing it, it is possible **transpose DOWN of one semitone**, ANY TIME the button is pressed, the current Key of the Music Signal.

"**#**" **Button** – Pushing it, it is possible to quickly **transpose UP of one semitone**, ANY TIME the button is pressed, the current Key of the Music Signal.

" ♮ " **Button** – Pushing it, it is possible to quickly go back to the **ORIGINAL** Key of the Music Signal.

Once pushed the above buttons, the "Normal Operation" screen will display the current transpose down or up (if any) of the Music signal, respect the Original Key.

Effect, Microphone and Music Volume Controls: the 6 buttons of this section are replicating the functions of the three relative encoders of the front panel, used for the Effect/Mic/Music Volume Control, described in the "***Effects, Microphones and Music fast Output Level Controls***" paragraph:

Effect Vol +/- Buttons – using the **+** and **–** "Effect Vol" buttons, it is possible to increase or decrease, respectively, the **Effect Output Signal Level**

Mic Vol +/- Buttons – using the **+** and **-** "Mic Vol" buttons, it is possible to increase or decrease, respectively, the **Mic Output Signal Level**

Music Vol +/- Buttons – using the **+** and **-** "Music Vol" buttons, it is possible to increase or decrease, respectively, the **Music Output Signal Level**

Once used the above buttons, the new Volume settings will be displayed on the Front Panel's LCD.

Subwoofer Volume Control: using the **+** and **–** "Subwoofer" button, it is possible to increase or decrease, respectively, the **Subwoofer Output Signal Level**

Center Volume Control: using the **+** and **–** "Center" button, it is possible to increase or decrease, respectively, the **Subwoofer Output Signal Level**

Preset Select Control: the 4 buttons of this section are replicating the functions of the "LOAD" buttons of the front panel, allowing the selection of one of the **first 4** presets of the 20 available on the KD-1540P.

NOTE: the KD-1540P Unit is compatible with the BMB Remote control.

- **Back Panel Connectors**

Referring to the below Back Panel's Drawing

Mic XLR Inputs – female XLR inputs for the microphones.
These inputs are the "equivalent" balanced of the front panel un-balanced Jack inputs.
Th microphone input level is also for the back panel's inputs controlled by the front panel's trimmers.

***Line Inputs* A1/A2** – RCA inputs for the 2x external Line Sources.
The A1 and A2 inputs can be selected by Sw.

Digital Inputs – RCA input for an external S/PDIF Source.
The S/PDIF input can be selected by Sw.

Line Output – RCA "REC" output for an external Recording Device.

XLR Outputs – male XLR outputs providing the result of the KD-1540P Karaoke Unit processes:
LEFT: Main Music Output Left.
Right: Main Music Output Right
Sub: Main Sub Output
Mic/Center: Main Microphone Output or Central Output

USB Connector – socket for the USB cable connection, allowing the connection between the Karaoke Processor KD-1540P and an external USB remote control as a PC.
The KD-1540P can be fully remotely controllable by a Pc Sw running under Windows XP.

Wired Remote Control Connector – socket for the "wired Remote Control connector" which can be used as wired remote control solution in alternative to the infrared control operated through the front panel's sensor, for the Commands Remote Transfer.

Note: the KD-1540P's back panel has four 3 positions slide switches allowing to modify the Line A1/A2 inputs Sensitivity so as the Left/Right Music Output and Mic/Center and Sub Outputs sensitivities, and in details:

Line A1/A2 Input Slide Switches:	Position "L"	- 9dB
	Position "M"	+0dB
	Position "H"	+9dB
Left/Right Music Output Slide Switches:	Position "L"	- 9dB
	Position "M"	+0dB
	Position "H"	+6dB
Mic/Center and Sub Output Slide Switches:	Position "L"	- 9dB
	Position "M"	+0dB
	Position "H"	+6dB

- **KD-1540P Technical Specifications**

The KD-1540P Digital Karaoke Processor is based on a powerful analog and digital DSP platforms having the following specifications

Analog Input Signal:	Line A	Left/Right, Un-Balanced, RCA
	Line B	Left/Right, Un-Balanced, RCA
	Mic 1	Mono, Balanced, XLR Female
	Mic 2	Mono, Balanced, XLR Female
Maximum Input Level:	Line	+12dBu
	Mic	-30dB
Digital Input Signal:	S/PDIF	RCA
Analog Output Signal:	-Ch4	Balanced XLR Male
	AuxL/R	Left/Right,Un-bALANCED,RCA
Maximum Output Level:	-Ch4	+15dBu
Digital Processing (DSP):	DSP Engine Dream(Voice),24bit(data)x96bit(coeff.),Sw Enhanced Precision	
Sampling Frequency:	48kHz	
S/N:	>106dBA	
THD+N:	0.005%	
Frequency Response (Bypass):	20Hz – 20kHz (+- 1 dB)	
Power Supply:	Switching Power Supply	
Remote Control:	USB, Infrared, Wired	

KD-1540P processes and Paths Block Scheme